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Pitfalls in Power Plan

Union Budget Analysed

Indian Influence on U.S. Writers

Our Atomic Energy Programme

V. V. S. Aiyar: Biography

New Rubber From Old

Muscovite's Diary

A Page Full of Humour

New Life For Army Officers

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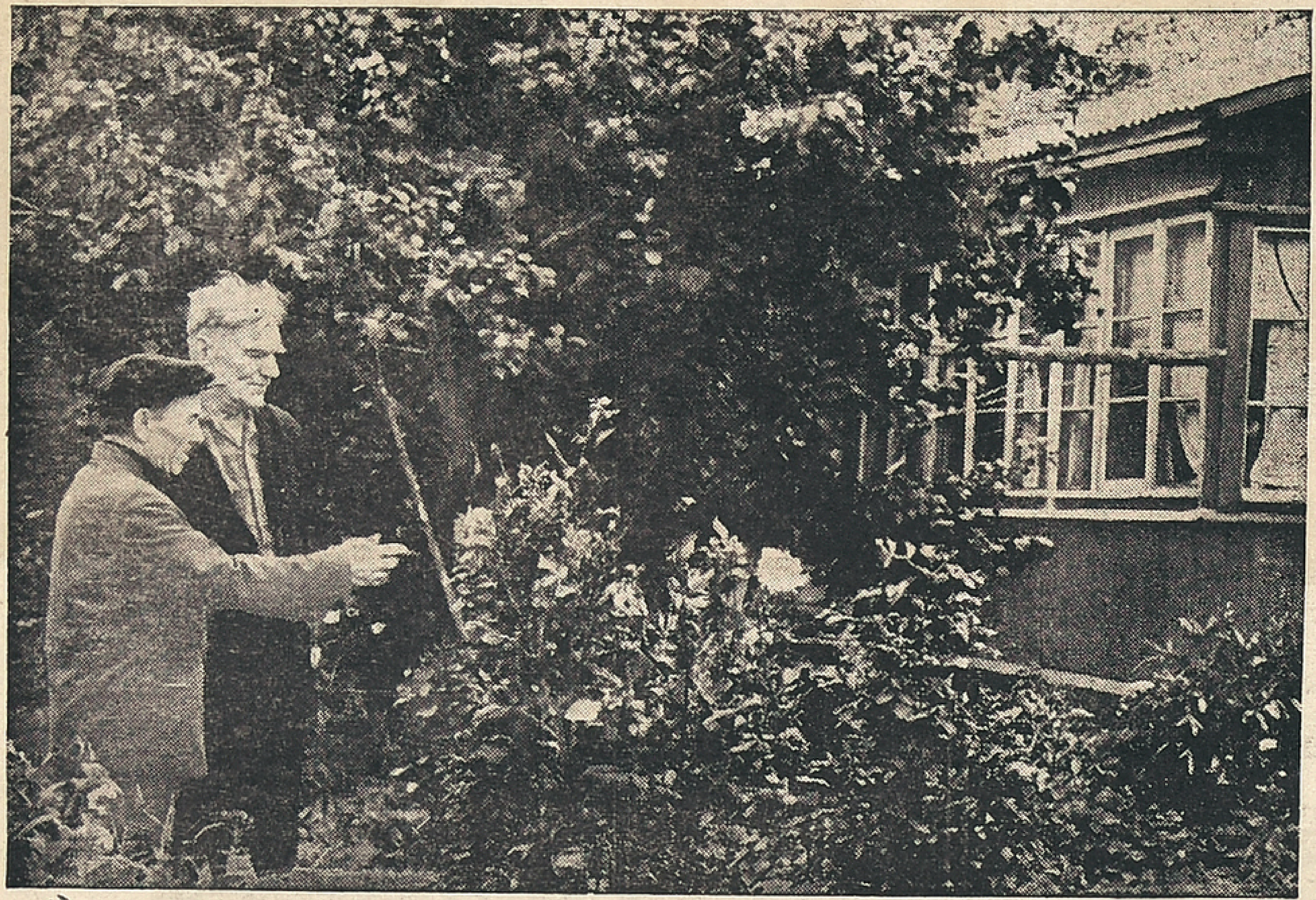

A fondness for flowers is also a common Gond.

Old Age-A Social Problem

The problem of old age is in fact everybody's problem. There are 290 million of them on our planet.

There are a little over 36 million people of pensionable age in the USSR (Men aged 60 and older and women 55 and older). Besides, there are about 19,000 centenarians, ranging in age from 100 to 167, in the USSR.

What should be done to make the life of these millions of old people happy and care-free?

The Soviet Union has answered the question:

There are 1000 homes for the aged and the invalids in the Soviet Union. More than 200,000 of them live in such homes.

The average age of the inmates is about 80. Every day specialists belonging to the various branches of medicine examine the inmates in their specially eqipped offices. There are a number of nurses and attendants to look after the inmates. The old people get four meals a day with special diets to those who need it.

The old people get eyeglasses, hearing aids, orthopaedic shoes and many other things free of charge.

An old man or woman who wants to live at a home should apply to the district social maintainance

(Contd. on Third Cover)

The Physiotherapy Centre.

The dinning room of the home

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Huge National Loss Because of Power Shortage

By I. SATYA SUNDARAM

NOWADAYS power plays a dominant role in economic growth in any country. In fact, the pace of economic growth of a country is often measured in terms of production and consumption of electric power.

There has been a heavy demand for power in India due to increase in the number of industries, including the mini-steel plants; increase in the number of irrigation pumps and the electrification of the railways. Power planning should form a vital element of our economic planning. But, unfortunately, in India today almost all the States are facing power shortage resulting in significant fall in production in many sectors of our economy. In the absence of adequate power, various inputs are either underutilised or remain unutilised, which involves national loss.

The Government proposes to nationalise electric supply undertakings still in the private sector. This may not be possible immediately because the Government cannot bear the financial burden of paying compensation and modernising the existing plants. The Government should therefore, give adequate loans to instal new plants in the private sector. Alternatively, the Government itself can set up new plants in the public sector. Either of these two things should be done immediately, prior to the possible nationalisation of power plants.

The assumption that the annual rate of rise in the demand for power during the Fourth Plan would be uniformly 10 per cent has proved wrong. In fact, even in a stagnant economy the demand for power rises by more than 10 per cent. It is reasonable to expect that during the Fourth Plan period there will be a 20 per cent per annum rise in the demand for power. Dr K. L. Rao feels that the target of the power generating plant capacity at the end of the Fourth Plan should be 26 million kw, that is, twice of what it was at the beginning of the Fourth Plan.

It is important to remember that we can have a net addition of ten per cent of power from a power plant, provided the generating plant had a capacity of nearly 14 per cent. This is so because there will be inevitable initial loss of power due to (*a*) power consumed in the auxiliaries and ancillaries, (*b*) losses in transformation, transmission and distribution, and (*c*) the provision for the standby plant.

Our power plant capacity at present is around 17-18 million kw. It is estimated by the Energy Survey Committee that for the growth of national income at 7 per cent in India, the installed capacity of power plant should be 21.41 million kw by 1971, 33.90 million kw by 1976, and 55.70 million kw by 1981. As shown in the table below, the per capita energy consumption in India is only 90 kw —far below the levels prevailing in some advanced countries.

PER CAPITA POWER CONSUMPTION IN SOME SELECTED COUNTRIES

Country	*Year*	*KW*
USA	1969	7,013
UK	-do-	3,700
USSR	-do-	2,628
France	-do-	2,408
Yugoslavia	-do-	1,006
India	1971	90

During the first three Plans, a lion's share of power consumption went to the industrial sector. For instance, in 1968-69, industrial sector consumed 70.1 per cent of the total electric energy, while domestic and commercial lighting accounted for 14.3 per cent: agricultural pumping consumed 6.8 per cent, and others consumed another 6.8 per cent. Thanks to the "green revolution", agricultural pumping is likely to consume 12 per cent of the total electric energy by the end of the Fourth Plan.

During the Plan periods, the installed capacity of power has been substantially increased—from 2.3 million kw at the beginning of the First Plan, to 10 million kw at the end of the Third Plan. This is likely to exceed 20 million kw at the end of the Fourth Plan. A thorough and critical study of India's power potential is indispensable for formulating plans and policies to accelerate the rate of growth of the economy.

Almost all the States, with the possible exception of Madhya Pradesh, Orissa, Mysore and Kerala, are experiencing acute power shortage. Punjab, Haryana Bihar and West Bengal are the worst affected. The State Governments have no alternative but to impose power cuts ranging from 8 per cent to 50 per cent.

The power shortage has devastating effect particularly on the industrial sector. Power shortage adversely affects not only production and exports but also labour-management relations and employment potential. The jute industry alone incurred a loss of Rs 7 crores in 1971, and it could not take advantage of the closure of jute mills in Bangladesh during its liberation war.

The agricultural sector could not make use of energised pumps for irrigation and multi-cropping purposes due to frequent power cuts. The well-to-do farmers alone are able to replace electric motors with diesel engines. The rural electrification programme had to be given up. What are the causes for the present power shortage?

The power shortage is serious in areas which mostly depend on hydro-electric stations. This is so because we have failed to make any reliable and worthwhile provision for the failure or variations of rainfall. No attention was paid to the provision of the stand-by thermal plants which can be operated whenever the rains are poor.

One of the unfortunate features of power supply in our country is that plants worth crores of rupees have to be entrusted

(*Contd on page 2*)

Heart Ever Wandering

By ZULFIA

I travel by land, by sea, by aerial ways.
I've flown over cities and villages, peoples and nations.
Earth lies beneath me, a patchwork quilt, a maze:
Many the harbours, homes, thoughts, aspirations.

Dream, song and love travel with me wherever I fare.
Onward I go, like this Earth of ours endlessly turning.
Even in sleep, I set out on my travels once more:
My bed is a ship, and it's bound for a bright new dawning.

Let time hurry on. No right to arrest it have we.
I'm pulled by the world and its ways, as by gravitation.
The movement of life fills everything written by me;
My heart ever wandering moves in perpetual motion.

From page 1

Power Shortage

to people with inefficient experience. Due to rapid expansion in the power supply systems, there has always been a dearth of the operation and maintenance staff of high calibre. This has resulted in great wastes in our power supply.

For instance, in most thermal stations, more than half of the power plant capacity in a station remains idle due to some minor or major faults which could have been totally avoided or rectified immediately with a capable operation and maintenance staff. Both discipline and responsibility are poor among the staff in the Electricity Boards resulting in frequent breakdowns in plants.

It was disclosed at the recent seminar on power shortage, held under the auspices of the Federation of the Indian Chambers of Commerce and Industry, that power losses in the transmission lines alone in India are round 16 per cent as against 4 to 5 per cent in some other countries. In some cases this may be due to long distances between the sources of power and the utilisation centres. The high losses are also due to the fact that our transmission lines are heavily overloaded. These losses can be greatly reduced either by raising the transmission voltage or by putting up an extra circuit wherever necessary or possible.

Apart from transmission losses there are losses in the process of distribution of power and the theft of energy, and the percentage of the total power that goes waste may come to 25 per cent or more. No wonder, the need of the hour is to reduce these wastes considerably by well-thought-out plans in future.

The present plant capacity is around 17 million kw, and if this has to go up to 40 million kw by 1980, the Government has to spend as much as Rs 8,000 crores. It is doubtful if the country can afford to spend this huge amount. The production capacity of our factories should be stepped up. At present our factories produce only some plants up to 120 mw output per machine. We should get the know-how to produce plants of at least 250 mw output per machine.

Our power planning is not able to get adequate finance. The financial position of the Electricity Boards is very weak. They are not at all in a position to instal new plants. Therefore, expansion of old plants or setting up of new power plants should be done either by the State Governments or by the Central Government.

A number of factors are responsible for the present power crisis. There is delay in the construction of civil works for power projects. Most projects are not able to get in time key equipment from indigenous and foreign sources. There is undue delay in the supply of coal to thermal power stations Another problem is shortage of steel. The use of inferior grade coal has resulted in excessive wear and tear of auxiliary equipment.

Added to all these, the Tarapur Power station was shut down for a long time due to defects in design and installation of the reactor. Some of the hydro-electric reservoirs are facing inadquate storage position due to the failure of rains. Finally, there is lack of adequate transmission facilities within each State and between neighbouring States.

The country is divided into five regions with Regional Electricity Boards to inter-connect the power systems through regional grids with a view to achieve over-all economy and ensuring reliable supply of power. It is high time that a permanent high-powered central body is set up to coordinate the operations of the regional grids. This can be achieved by developing adequate transmission systems.

The Union Irrigation and Power Minister has admitted that the progress in the construction of inter-State transmission lines is poor. The Planning Commission has agreed to raise the Fourth Plan original outlay of Rs 22 crores to Rs 40 crores to enable the State Electricity Board to complete expeditiously all transmission lines under construction.

The presence of a central authority on a permanent basis could easily solve problems relating to inter-State agreements for power distribution. The high-powered permanent body should also fix inter-State tariffs. At present, high tariffs are being charged by the surplus States.

The power crisis could not be solved so long as most States depend on seasonal hydel projects. These should be supplemented with thermal and atomic power. The Power Economy Committee, appointed by the Government of India in May 1969, has observed that thermal power could be increased by 8 to 10 per cent by suitable improvements in the quality of fuels, maintenance and operation. Further economy can be made if boiler regulations are modified to change the periodicity of overhauling.

There is also a suggestion that power planning should not be linked to Five Year Plans. There should be a 10-year or 15-year perspective plan for power. Due encouragement should be given by the State Governments (preferably in the form of subsidies and interest-free loans) to industrialists for installing diesel generating sets to ease the pressure on power.

The maintenance of power stations and transmission lines is not up to the mark. A mere one per cent reduction in transmission loss would be able to save Rs 5 crores a year. It is estimated that at present there is a annual loss of about 18 per cent in transmission which means that the country is losing 3 to 4 million kw.

The target of doubling the power generation by the end of the Fifth Plan could be achieved only by acquiring the heavy electrical equipment. The largest turbines produced in India have only 120 megawatts capacity. Both the Heavy Electricals and Bharat Heavy Electricals should produce turbines of higher capacity.

Since increasing reliance has to be placed on thermal power in future, coal production has to be increased considerably. It is estimated that the total coal requirements for the existing thermal power stations, estimated to be about 21.6 million tonnes in 1972–73, were expected to increase to about 29.6 million tonnes by 1978–79.

Dr K. L. Rao told the Rajya Sabha on February 20, 1973, that two-thirds of the installed capacity for power in the Fifth Plan would be thermal power which reduces the dependence on hydro-power to a large extent. In fact, one of the main reasons for the present power shortage is fall in power generation from hydro-stations due to shortage of water in reservoirs. The Government should therefore, set up big thermal plants of 400 to 500 mw in the coal belt areas of the country. The Government had already appointed a committee to study the setting up of big coal-based thermal plants in various States.

One should favour the suggestion that the Government should permit groups of industrialists to set up private small generating power plants up to 100 megawatts capacity, to enable them to feed power to the group-run industries and thereby overcome the power shortage. The Government should release foreign exchange for the import of equipment, besides ensuring adequate supply of fuel—either coal or furnace oil to run the plants.

The Government should favourably consider this suggestion in view of the current acute power shortage which has resulted in the loss of 30 per cent of the total all-India production.

ON THE COVER

Kumari Alamelu Valli, one of our finest Bharatanatyam Artistes, is shortly leaving for Europe on a cultural tour. She will participate in the Paris Art Festival (Theatre De la Ville) from Apr. 17 to 22. Valli is the daughter of Mr. Muthukumaraswami Mudaliar, Zamindar of Choonampedu and a student of Mr. Chockalingam Pillai and his son Mr. Subbaraya Pillai of Pandanallur.

FUNNY

A young lawyer attended the funeral of a millionaire financier.

A friend who arrived at the church a little late took a seat besides the lawyer, and whispered, "How far has the service gone?"

The lawyer nodded towards the clergyman and whispered back, tersely. "Just opened for the defence."

Defence Notes

Preparing Service Officers For New Life

THE Defence Services aim at keeping their personnel as young as possible. This policy is applicable not only to the rank and file but also to officers.

On an average, 750 officers retire or are released every year from the Armed Forces. The Directorate General Resettlement, Ministry of Defence, renders employment or self-employment assistance to these officers. Permanent Commissioned Officers, who retire generally in the rank of Lt. Colonel, Wing Commander and Commander, leave service at ages varying from 48 to 52 years.

Retirement benefits alone are not enough to sustain these officers. In any case, with the pension and gratuity they are entitled to, they cannot maintain the standard of living to which they are used. The officers are still young and have many acquired rich experiences in different fields. For these regular officers there are no reservation of vacancies in Central and State Governments. The existing reservations are applicable only to Emergency Commissioned Officers and Short Service Commissioned Officers.

The problem, therefore, is to help these officers to resettle in civil life so that they are successfully absorbed in the mainstream of national life. The nation also gains by utilising the services of a group of citizens trained to functi n effectively in a disciplined manner.

To achieve the twin objectsve, the Directorate General Resettlement reorient retiring or retired officers to the needs of civil employment through training courses covering such fields as Business Management, Personnel Management, Industrial Engineering, Farming and Agriculture, Export Techniques, etc. These courses equip the officers not only for employment in civil life after retirement but also help them towards self-employment in starting some business of their own.

Masterpiece Of 17th Century Painting

LENINGRAD, (USSR). The picture "Mourning" by French painter Jacques de Bellange has been discovered by the workers of the Hermitage in Leningrad, one of the largest museums in the world. The canvas whose author was considered unknown, had been purchased from a Soviet citizen. After the picture, was compared with the drawing by Belange of the same title, cleared by restorers and examined with the help of X-rays, it was possible to determine that this was the genuine picture which for centuries was believed to be lost.

City Train Timings

With effect from Nov. 1

MADRAS CENTRAL

	Dep.	Arr.
Howrah Janata	8-40	19-15
Tatanagar Exp.	12-40	14-10
Howrah Mail	20-55	5-05
Circars Exp.	22-00	6-40
New Delhi Exp.	8-25	17-55
Hyderabad Exp.	13-35	10-15
Delhi Janata	15-10	15-55
New Delhi-Air-conditioned/Grand Trunk Express*	19-45	10-55
Dadar Express	10-00	17-15
Bombay Janata	13-40	14-00
Bombay Mail	21-50	5-15
Tirupati Exp.	7-00	21-40
Brindavan Exp.	8-10	19-05
Bangalore Exp.	12-45	15-20
Bangalore Mail	21-15	5-40
West Coast Exp.	12-25	14-45
Kerala Express	16-25	9-35
Mangalore Mail	20-20	7-00
Nilagiri Exp.	20-00	7-20
Cochin Mail	19-20	6-10
Gudur Pass.	8-45	22-50
Gudur Pass. (via Arkonam)	—	21-45
Vijayawada Pass.	15-20	12-40
Vijayawada Parcel Passenger	23-45	4-15
Raichur Pass.	9-25	20-10
Tirupati Pass.	17-00	9-45
Bangalore Pass.	6-05	21-00
Jolarpettai Pass.	11-20	14-20
Arkonam Pass.	18-10	—
Coimbatore Parcel Passenger	21-25	6-10

Janata Express—III Class only.

*This train will run as air-conditioned express ex-Madras Central on Mondays and Saturdays and arrive Madras Central on Wednesdays and Fridays. On the other days of the week, it will run as Grand Trunk Express.

MADRAS EGMORE (MAIN LINE)

Rock Fort Express	9-10	17-10
VirudunagarJanata	13-40	7-45
Rameswaram Exp.	19-30	8-05
Tiruchi Pass	6-45	12-05
Villupuram Pass.	15-55	12-05
Trivandrum Pass.	21-30	5-20
Madurai Parcel Passenger	22-25	4-50
Shencottah Pass.	—	21-10
(CHORD LINE)		
Trivandrum Exp.	8-10	18 10
Tirunelveli Exp.	18-15	8-35
Trivandrum Mail	20-30	7-15
Pandyan Exp.	20-10	6-40
Tuticorin Express	21-45	5-40
Rameswaram Passenger	11-00	16-25
MADRAS BEACH		
Chingleput Pass.	17-07	10-40
Kancheepuram Passenger	17-33	9-50
Kancheepuram Passenger *	18-12	9-18

*Will run on all days except on Sundays.

Sunday service will be observed only on Madras Beach-Tambaram Electrified suburban section.

Janata Express—Third Class only.

Union Budget : 1973-74

Drift For Want of Direction

By KAMAL NAYANKABRA

BUDGET consciousness has increased tremendously over the recent years in our country. The entire media is full of it for quite some time. It indicates increased popular interest in public affairs in general and in economic matters in particular.

The enhanced role of the Government's budgetary operations in the national economy, the total Central Government revenue accounting for more than one-fifth of the net national product, is one factor explaining this interest. The continuing trend of widening the tax net with each successive Budget affects an increasing number of people to an increasing extent. In fact, before the Budget is presented, people their fingers crossed on account of a feeling of suspended animation caused by the fear regarding the extent to which their purses would be lighter because of the Budget proposals.

However, the number of people watching the Budget would not certainly exceed the number of people who ever come to know of the Budget. Now, it certainly would be difficult to hold that those who do not come to know about the Budget are people who are not affected, for worse or better, by the Budget. One may tend to think that this lack of awareness of the Budget is symbolic of the voicelessness of the masses in our socio-political life. An act in performing which the Finance Minister fancies himself as the chose instrument of the democratic processes for shaping the destiny of the masses, is an act of which a vast mass of our society is totally ignorant of.

This type of a reaction to a particular year's Budget underlines the basic appraisal of the nature of our democratic polity. We have alluded to it deliberately in order to keep the rest of of our assessment of the current year's Budget free of these questions about the fundamental nature of our socio-political structure. This is an important and reasonable methodological rule for an appraisal of a government's yearly fiscal operations.

A Budget, by definition, is a short-term instrument and, therefore, cannot bring about spectacular changes. Budget, if it were to accomplish all this, had to follow the changes in the political equations.

The interest which a literate, conscious man in the street shows in the Budget proposals is mainly confined to the tax proposals and their likely impact on his cost of living. Even relatively more perceptive commentators confine their attention mainly to the question of the price effect of tax proposals and its growth and equity impact. In the rest of the matter it is implicity taken to be a routine exercise. This certainly is a mistaken notion.

One of the commonly accepted tenets of traditional public finance is that without regard to public expenditure, its magnitude and composition, one cannot properly evaluate the tax system or changes in the tax system. The hard core and basic structure of public expenditure seems to have become so rigid in our country that not many choices seem to be exercised even by the Finance Minister in this respect.

What really happens with respect to the expenditure side are some marginal readjustments in and additions to and/or subtractions from various heads of expenditures. In any given situation it is extremely difficult to correlate a particular change in the expenditure pattern with the likely outcome of such a change.

This is so for many reasons. The implementation machinery has very few buyers of its efficiency and honesty. The control of the Finance Ministry over expenditure is so weak and ineffective that one does not really know what to make of the Budget figure. Then, the fate of the budgeted financial allocation becomes all the more vaguely related to physical programmes because of the impending price rise. It may not even be unlikely that the Financial allocation has behind its back only a vague and imprecise physical programme. Thus, a man conversant with the ways of our bureaucratic functionaries and their functioning would not tread on the slippery ground of evaluating public expenditure.

Some structural and fuuctional features of economy also add to the difficulty of evaluating public expenditure proposals contained in the Budget. Some results depend on monsoon, some on the availability of foreign assistance, and some others on complementry public or private investments. For still other results, the Centre would have to look to the State governments thanks to our federal structure in which financial power lie at one place and executive power at another. To take a recent example, Rs 190 crores were provided by the Centre for crash programmes designed to increase food production in the current rabi season. The actual execution of these programmes vests in the States and it has been admitted that physical targets will fall short of expectation.

The upshot of the foregoing is that while the usual practice of judging Budget proposals relating to taxation alone is incomplete and misleading. An attempt to evaluate expenditure proposals, their individual as well as total impact, and broad evaluation on the basis of a comprehensive analysis of tax expenditure and deficit-surplus as well as of various real and money flows is essential. We admit that it is a difficult and uncertain task.

In what follows we shall indicate some of the issues of this type arising out of a first look at 1973-74 Budget. In the accompanying Table we present a synoptic but composite picture of the budgetary operations of the Central Government for some selected years. Our starting point is 1960-61. On the basis of this, we shall try to bring out some salient features and the issues underlying them.

Big, quantitative growth in scale of budgetary operations is the first thing that strikes one. Total Revenue under the Budget is expected to be over seven times the figure of the early sixties. Even after discounting the pure monetary content owing to price rise, the increase remains spectacular. Compared to this seven times increase in Revenue Receipts are likely to be a little over twice the 1960-61 figure. After making allowance for the price rise which took place during this period, the increase gets further reduced.

Before arriving at any conclusion in this respect, let us also look at the relative position of Revenue Expenditure and Capital Disbursements. Again we find that the growth of Revenue Expenditure has been much faster than the growth of Capital Disbursements. Despite the prime reliance placed on the state as the agent and executant for the growth process of the economy, it continues to remain, on the traditional model, the main purveyor of collective good.

The fact that the state undertakes nearly 60 per cent of the total investment in the economy, while Capital Expenditure of the state continues to stagnate around one-third of the total expenditure indicates the inabi-

(*Contd. on page* 10)

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FUN AND LAUGHTER

HIS PROTEST

Counsel for the defence was cross-examining the witness, a lovely blonde with big blue eyes.

"Where were you," he thundered, "on Monday night!"

The blonde smiled sweetly.

"Out for a run in a car."

"And where were you," bellowed counsel, "on Tuesday night?"

"Out for a run in a cae," repeated the blonde.

Counsel leaned closer.

"And what," he said, "are you doing to-morrow night?"

Prosecuting counsel leaped to his feet.

"My Lord," he protested, "I object to that question."

"And why do you object?"

"Because I asked her first!"

* * *

HIS BUSINESS

"One whole and one half ticket, please" said the woman passenger.

The conductor stared at the boy sitting by her side.

"You must pay full fare for that lad. He must be over fourteen."

"How can he be fourteen when I have been Married only twelve years?" demanded the passenger, angrily.

"Madam," replied the conductor, icily, "I'm here to receive fares, not confessions."

* * *

WON'T MOVE

A friend called upon a guest at a hotel, knocked and asked him to open the door.

"Can't; door's locked!" the voice within announced.

'Well, unlock it!" the caller requested.

"Can't: lost the key!"

"Great Scott, man! What will you do if there's a fire?"

"I won't go."

* * *

"I have played on some of the most beautiful courses in the world," says a golfer. "But golfers, as a rule, are not moved by scenery."

Although the reverse is often true.

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LALJEE GODHOO & CO. MADRAS 1
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A TASTY MODEL

The schoolmaster told his boys to bring something to school to serve as a model, such as a flower or a toy, and he would let them draw it during the afternoon. Well, the drawing lesson had just commenced when teacher noticed one little boy was crying.

"Boo-hoo! I've swallowed my object, sir," he explained.

"Goodness! What was it?" gasped the teacher.

"A banana, sir!" sobbed the little lad.

* * *

DISCRETION

Hearing someone prowling about down stairs, the timid husband seized a candle and proceeded to investigate, while his even more timid wife buried her head beneath the bedclothes.

Suddenly her husband came upon a burglar, who covered him with a revolver.

"Oh, don't take any notice of me," said the timid man quickly "I'm only walking in my sleep."

FULL ENOUGH

The vicar asked one of his parishoners to help him in his visiting work.

"Oh, yes," said she, "I should be delighted."

"Well," said the vicar, "call and see poor old Macdonald; he's just lost his wife. Try to cheer him up a bit."

So the good woman called and found the old man sitting in his armchair with half a bottle of whisky on the table and a glass beside it.

"Is that the only consolation you've got?" she asked, pointing to the whisky.

"No, ma'am—I've got three more bottles on the shelf."

HER MISTAKE!

"King John was a very bad man, daddy," said the professor's little daughter. "Fancy him running over the poor people with his motor cars!"

"Goodness! Where did you learn that?" asked the professor.

"Well, my teacher told us that King John ground down the people with his taxes!" she replied.

x x x

SOS

The agitated customer entered the chemist's shop.

"A few days ago you sold me a plaster to help me get rid of my lumbago," he said.

"That's right, sir, "replied the chemist. "And what can I do for you now?"

"I want you to give me something to get rid of the plaster."

PLENTY OF IT

The struggling author and his levely young wife were at a party. A friend approached the writer and, with admiration in his voice, said: "Penwell, your wife is the most beautifnl woman in the room And her gown is positively a poem!"

The writer nodded gloomily, and replied: "Not a poem, old man—sixteen poems, seven short stories, and a novel."

* * s

HELPFUL !

Algy was, or had been Aunt Matilda's favourite nephew. His name was still on her list for the annual gift distribution.

"What did you give him last year?' asked her companion.

"A cheque," said auntie, "and, poor boy, he told me he couldn't find words with which to thank me."

"And what are you giving him this year."

"A sixpenny dictionary."

* * *

COMPENSATION

"You know, old man," said brown, "that fellow's too smart for me. Do you know what he did?"

"No," said Green, ' what?"

"Well, he sold me a plot of land that was two feet under water. I went round and demanded my money back."

"Did you get it?"

"Got nothing! He sold me a motor-boat!"

* * *

COUNTED OUT

The discovery that a married couple in his flock were liable to quarrel upset the vicar. So he decided to speak seriously to the husband.

"You know, my dear friend, that you and your wife should be as one."

"As a matter of fact," replied the other sadly, "we are as en."

"How's that?"

"Well, she's the one and I'm the nought."

* * *

NOW YOU KNOW

Little Percy was standing in front of the mirror using his mother's powder-puff, when his young sister saw him and exclaimed: "You mustn't do that Percy! Only ladies use powder on their faces—gentlemen always wash!"

* * *

It was the ships concert and the song was "Asleep in the Deep." The singer had got well and truly deep, when an awed voice from the back of the hall was heard:

"Crickey! He'll scuttle himself in a minute."

Carrying Out Orders!

A small boy had been called to give evidence on behalf of his father.

When the boy stepped into the witness-box he looked just like a freak from the circus. A big Trillby hat was pulled down over his eyes, his coat reached down to his knees, the trousers he wore trailed on the ground under his shoes, whilst over one of his arms was a big umbrella, and his hands were covered with thick gloves. The judge sat forward and stared.

"Why do you come to the court like that, my boy?" he asked, kindly.

The youngster pulled a police summons from his pocket.

"Look, sir," he said with a dignified air; "it says here, to appear in his father's suit.'"

HIS FEAR

"Will you try some of my angel cake?" asked the young wife of her husband.

"No, thank you," was the reply.

"Are you afraid it isn't good enough?" she asked.

"No; I'm afraid I'm not good enough."

"Good enough for what?"

"Good enough to become an angel."

* * *

HEAVEN KNOWS!

The wife had been put on the budget plan. At the end of each month she and her husband would go over the accounts together. Every once in a while he would find an item "H O.K., 15s" and a little farther on, "H O K. £3."

Finally he asked: "My dear, what is this—'H.O.K.?"

"Heaven only knows," she replied.

Nightmare

The dinner came to an end, and the chairman called for silence.

"Gentlemen," he began, "I will now call upon Mr. Long, our distinguished guest, to make his speech."

The guest rose and was greeted with polite applause. When this had died down, he started.

At the end of ten minutes he was still speaking, but when at the end of half an hour he had not finished, the patience of his listeners began to get exhausted.

In the end the speaker wound up with: "Speaking is nothing to me. As a boy I used frequently to talk in my sleep."

"And now," a drowsy voice was heard to exclaim, "you talk in ours."

V. V. S. Aiyar-49

By R. A. PADMANABHAN

STORM IN A TEA-CUP

A "storm in a tea-cup" is a phrase denoting how a small and insignificant incident is made much of and spoils everything. It is an everyday experience that we see. Very small issues are blown out of proportion into very big causes and a good lot of time and energy are wasted on them. The "Gurukulam Controversy" which later turned into the "Gurukulam Agitation" was one such storm in a teacup, which unfortunately still brings about bad blood between the different sections of the people of Tamil Nad. Few persons care to verify facts, fewer still care to go to original sources of information and understand what exactly happened and who exactly said or did what. Even the best of men go on repeating myths without taking pains to know how far they are true. By constant repetition such myths have now gained the sanctity of truth in the eyes of the younger generation, and it is somewhat difficult to disabuse them of their belief. But still, truth is truth and an honest attempt shall be made here to arrive at it in the best interests of historical facts.

The "Gurukulam Controversy" and "Gurukulam Agitation" lasted some two years, 1924–25. It all started with the question of "intercaste dining" (cosmopolitan eating). The Tamil Gurukulam of Aiyar, started in 1922, was weathering many teething troubles and slowly making headway when this unfortunate controversy started. Aiyar depended on donations big and small for the day to day running and gradual expansion of his institution. With missionary zeal he spoke about his institution to every one whom he met and got whatever help he could. It is to the credit of Tamil Nadu that almost every-one, rich and poor responded as best as he could, and great optimism prevailed about the future of the institution. Aiyar's diaries of the years 1922-25 contain hundreds of addresses of persons that he had met accidentally in course of his travels or otherwise, showing how he was devoting every moment of his life to improve the institution. All sections of the community were included in his lists–Hindus Brahmins, Non-Brahmins, Muslims, Christians, and Jains, showing that the Tamil Gurukulam had an universal appeal. Aiyar's fame as a revolutionary-turned-Gandhian also helped to gain universal support for the Gurukulam.

When Aiyar started his Tamil Gurukulam in 1922, fiftyone years ago, the arrangement for food for resident students was made on a cosmopolitan basis Brahmin and Non-Brahmin students and staff including Aiyar all sat together and ate together. In the milieu of 1922 this was an innovation, ardently desired by all nationalists. But soon, an embarrassing situation arose. The parents of two Brahmin boys took exception and requested separate dining arrangements for their boys. As Aiyar had not anticipated any friction on this score, he had not stipulated at the outset that dining arrangements would be on a cosmopolitan basis. Since the parents or guardians of the two boys were ardent supporters of the Gurukulam and since their boys had been taken unconditionally, Aiyar thought it fit to give exemption to the two boys to sit separately and dine in the kitchen. As for the rest, both students and staff, they all continued to sit together and eat together without any distinctions of caste or creed or religion.

Unfortunately, when recess came and students went home, the innocent words of two boys that two Brahmin students were sitting seprately and eating was misconstrued by their parents as a going back on the initial principle of cosmopolitan dining. They thought that Aiyar was being party to social discrimination, although right from the start inter-dining was the rule and exemption was granted (till the end) only to the two boys. The Non-Brahmin Movement and its political wing the Justice Party had been started some years before this, mainly with a view to oust the Brahmin from his monopoly of Government jobs. Therefore this alleged discrimination became a big point of argument everywhere. Notwithstanding Aiyar's and others' denials and clarifications, a tearing campaign charging discrimination was set into motion by no less a person than the President of the Tamil Nadu Congress Committee and its Secretary. Dr. P. Varadarajulu Naidu the President and E. V. Ramaswami Naicker (Periyar), the Secretary were both powerful orators and both had popular papers at their command. Both of them felt that the exemption given even to the two boys should be scrapped, and with this in view they carried on a big agitation for this purpose. However, as their agitation progressed, newer demands cropped up, such as that the cook should not be a Brahmin. Still later, another demand was made, that the Gurukulam should be handed over to Dr. Naidu and a few others, who claimed to be representatives of the majority of donors.

Aiyar explained that except for the two boys admitted without any pre-condition, all others will follow the cosmopolitan system of eating; the rule he said would be strictly enforced in the case of all new entrants also. As for the cook, he thought it was too hasty a move which would not find acceptance even among sections of other communities.

Aiyar's stand did not satisfy Dr. Naidu and his supporters. As all the persons involved in the controversy were Congressmen, it was thought the matter could be placed before Mahatma Gandhi, then Congress President also, for his adjudication. Gandhiji came down South at this time in connection with the Vaikom temple satyagraha, a non-violent agitation to gain for the "depressed classes" (Harijans) the right of passage in the public roads round a temple in the town of Vaikom in Kerala. Both Dr. Naidu and Aiyar took the opportunity to meet Gandhiji, but Gandhiji would not pronounce any judgment openly in view of the delicate nature of the controversy. He was reported to have given a solution in his own hand-writing to Dr. Naidu, with a copy to Aiyar, but this was not made public. However, press reports in reliable papers and a general statement of policy on this question by Gandhiji in his weekly "Young India" showed that Gandhiji was totally against compulsion in the case of the two boys.

* * *

This biographer of Aiyar has had the good fortune to get at the entire file of "The Hindu" of the period and at the file of the Tamil weekly "Navasakti" for the crucial period October 24, 1924 to October 1925. "The Hindu" was certified by Dr. Naidu, even at the height of the controversy, as one of the two dailies that carried impartial and full reports of the Gurukulam agitation. As a matter of fact, Dr. Naidu warned North India not to be misled by reports in other papers but to see the reports in "The Hindu" and "Justice", the English daily organ of the Justice Party representing the Non-Brahmin cause. The "Navasakti" has been useful in that it also reproduced invariably the statements and public pronouncements of Dr. Naidu on the subject as well as Aiyar's rare rejoinders. "Navasakti", edited by Tiru Vi. Kalyanasundara Mudaliar (Aiyar's predecessor in the Editorial chair of the Tamil daily "Desabhaktan" Tamil daily) was neutral at first, but later disagreed with Aiyar's stand. Apart from these papers, this biographer has also had the benefit of going through the entire file of Aiyar's "Balabharati", and the biography in Tamil of Aiyar by Swami Suddhananda Bharati, who was one of the leading members of the teaching staff in Aiyar's Gurukulam. Latter day pronouncements on and articles about Aiyar have also been

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That Art Lover

Hardly a day passes without the Italian press reporting a theft in some art museum. Official records show that there have been more than 25,000 instances in the last fifteen years.

The stealing of work of art in Italy is as well organized nowadays as drug and dinmond smuggling," says Rodolfo Siviero, whose job it is to get back the sculptures and paintings that have been stolen and smuggled out of the country. "It is carried out by Italian thieves working for foreign collectors or, more correctly, for profiteers."

One such collector is the West German multi-millionaire Baron Hans Heinrich Thyssen-Bornemisza. From his father, the industrial tycoon and a close friend of Hitler's, he inherited a collection of more than 400 priceless paintings, many of them stolen in occupied countries during World War II, and decided to expand it. He acquired a luxrious villa in Switzerland and keeps his 'family' collection there, constantly replenishing it. The latest acquisitions are Francesco di Giorgio Martini's 'Madonna with child" and the 13th-century masterpiece "Deposition from the Cross."

How did he get them? Here is what the Baron himself had to say about it: "I knew I couldn't buy the 'Christ' in Italy, and so I didn't even try. But when I was offered it by chance in Switzerland, that was another matter."

What Thyssen did not say was that for this masterpiece, valued at almost two million West German marks, he paid only 140,000 Nor did he say from whom he made this profitable purchase. Newspapers, however, report that the Italian authorities have accused Thyssen and his "agents"—Florentine restorer Margo Grassi, his brother Luigi, Giorgio Ciolli and Jacques de Faramond—of systematically smuggling works of art out of Italy. There is evidence that since 1963 this quintet has spirited millions of dollars' worth of masterpieces out of that country. Baron Thysssen got away with it, and now claims that he had nothing to do with the whole affair. The titled smuggler is in no danger of landing in the dock. He has left his Florentine agents to face the music.

THUS SPAKE

THE MAHATMA

Satyagraha is utter self-effacement, greatest humiliation, greatest patience and brightest faith. It is its own reward.

ASOKA SCENTED BETEL NUT POWDER

Free India

SUNDAY Mar. 18, 1973.

Power for Small Units

A democratic government is expected to take particular care of the "weaker" sections of the society.

It is the basis for extending so many aids and concessions to the smaller units in industries also. So many facilities are offered like cheap finance, developed plots and the like. Among the newspapers, smaller ones are given special encouragement.

But in practice benefits of all Government plans and schemes go easily to the bigger and "richer" units only.

A case in point is the power cut. While the smaller units have taken it as unavoidable, bigger units do not think so.

Among the weekly newspapers, the Big Three have gone to Court and got an injunction. Smaller weeklies cannot afford the cost of going to court.

So we expect the Government to relax the power cut for all newspapers till the High Court gives a final judgement.

If the small newspapers lose their readership for some reason or other, it will be very difficult to pick up again.

Some of our Ministers are well aware of the problem as they have been publishers of newspapers and it may not be difficult for them to understand it.

Indian Influence on American Writers

D.V.K.RAGHAVACHARYULU

AMONG the curiosities, brought by the prosperous shipping houses of Boston from Calcutta in the nineteenth century, were translations of Indian classics in English notably the principal *Vedas* and *Upanishads*, the *Bhagavadgita*, *Vishnu Purana*, *Martvamsha*, *Hitopadesha* and *Panchatantra*. When the books reached Emerson, Thoreau and Whitman, their effect on them was immediate and inspiring. That process of cultural interaction and influence has continued since then. Indian ideas and ideals have even returned home through American channels with an alienated majesty to be recycled into our own national renaissance.

Emerson's 'Oversoul' concept, derived partly from Vedantic inspiration, has re-emerged as the supramental consciousness in Sri Aurobindo. Both Thoreau and Gandhi were, by conviction and influence, true Satyagrahis to be followed later by Vinoba Bhave and Martin Luther King. Whitman's *Leaves of Grass* was considered to be Yankee Bhagavadgita; the cyclonic monk Vivekananda read and reread the *Song of Myself* and concluded that Whitman was a genuine Sannyasin If Vivekananda was discovering Whitman at Chicago, Henry Adams was contemplating Buddha and Brahma at Anuradhapura. Adams found in Indian wisdom at least a momentary stay against his spiritual confusion. Mark Twain, who dispensed laughter to the millions, visited Kipling's country and went back a confirmed misanthrope and a mysterious stranger in his own land. Tom Sawyer and Huckleberry Finn have in return, entered the boyhood mythology of Swami and his friends. Paul Elmer More and Irving Babbitt taught Sanskrit and the Dharmapada at Harvard, and applied the doctrines of Pramada, Auchitya and Lokachinta to Western literature to refute romantic excess and uphold classical propriety. Their pupil, Eliot, absorbed the Indian tradition, into his poetic individuality and when Indian scholars use his theories of the objective correlative and irony, they are unconsciously remembering the ancient alamkarikas.

INFLUENCE OF GANDHI, NEHRU AND TAGORE

Ezra pound, Robert Frost and Upton Sinclair were sincere admirers of Tagore. Nehru's agonised reference to Frost's poem, Stopping by the Woods, is well-known. Eugene O' Neill, who dramatised Indian themes in Lazarus Laughed and Marco Millions, was saved from self-destruction by Indian philosophy to which he was introduced by the New York, anarchist, Terry Carlin, who was a close friend of Dhan Gopal Mukherji, the Indian exile in America. Wilder's *Hedven's My Destination* has a salesman hero, who preaches non-violence and Satyagraha. Saul Bellow's *Herzog* is an eccentric medley or Marcus Aurelius, and Gandhi writing unmailed letters to Nehru and Vinoba Bhave on the predicament of modern man. Norman Mailer, Salinger, Kerouac, Ginsberg and others have their own usable India. Recent Hermentical poetry in America shows a strong Indian slant towards Dhyana and Bhakti via Zen and transcendental meditation. Denise Levertov is inspired by Tamil devotional poetry. Muriel Rukeyser is enchanted by the aesthetic modalities of Ajanta. William Stafford has made some articulate renderings of Ghalib's Ghazals.

CULTURAL FORCES

It would, however, be erroneous and unwarrnated to conclude that American writing is Indian thought writ large. American writers respond to cultural forces, wherever they may come from, at the creative rather than mimetic level, Otherwise they would not be meaningful or interesting. Emerson, for instance, uses the Yama Nachiketa discourse in Brahma, and the Parasara-Maitreyi dialogue in Hamatreya, to attest and revalorise his own specific situation and intuition as a nineteenth century American in revolt against the repressive cheerlessness of the calvinist tradition. The concept of the Universal Soul is set up as a foil to that of Divine Election; and the Vedantin is put up to fight Cotton Mather and Jonathan Edwards.

Similarly, Thoreau seeks the sanction and authority of the Hindu ascetic ideal for his life in the woods. Even his contemplative mixture of the Ganga and Concord waters retains a strong flavour of the Protestant ethic. Thoreau's real motive was not renunciation, but a bracing immersion in the life-force. Footrugs and paperweights were messy and cumbersome; no less were sham, greed and speed; they were a hindrance to the invisible velosities of the spirit. Hence the need to tet life on first principles, and feel the soul's texture by the touch of the mystic. The infinitude of the private individual was what Emerson preached; but Thoreau had to prove it by experimenting with the truth. The metaphor of the Brahman was a proven and reliable wisdom, whereby he could see the world with new eyes. The forest was the axis of re-entry into society, not an escape route away from secular strife. Walt Whitman's *Leaves of Grass* reveals the poet's creative sympathy with Vedanta and Yoga. The theme of the *Song of Myself* is the transcendent Self as witness to the Cosmic reality.

INDIAN MYTH AND PHILOSOPHY

In the poem, *There was a Child Went Forth*, Whitman shows awareness of the basic Hindu attitude revolving the interpenetration of subject and object. In *Passage to India*, he employs India as an eidolon for America's Manifest Destiny, implicating the past into futurity, and prophesying the passage of the human soul to cosmic and divine unions. The poem, *Chanting the Spuare Deific*, is said to have been inspired by the image of Shakti as Durga and Kali which Whitman happened to see in the Tudor Collection. The 'dark Hindu half of life', as Melville calls, it as embodied in the image, interlaced with the creative process, held out a shock of recognition. Whitman finds his own conception of satan as a vital being authenticated, so that he expands the Christian Trinity into a Delfic Square in which Satan is adapted as Son of God.

Herman Melville represents the sceptical side of American Romanticism, stressing human limitation rather than human possibility. His reference to Indian myth and philsophy are naturally coloured by his tragic vision. Apart from the scattered allusions in Moby Dick to Matsya-Avatara, Vishnu, Shakit, Shiva and Brahma to emphasize the cosmic immensity and creative mystery of the white whale, Melville has an interesting poem on Rama. Melville interprets the story of Ramayana as God's trial by a human existence, reflecting the author's characteristic theme of man's need as God's necessity. He sees in Rama's heroic suffering and renunciation the value of self-alienation and redemptive martyrdom. The Indian epic hero's exile and isolation demonstrate the tragic equation of the Fortunate Fall; Rama's outlawry brings cosmic justice into question; but it is also the instrument that brings out the 'Patient root of virtue'! Melville finds the paradox of life and fable agree in Rama as in Christ and Daniel Boone.

The Orient attracted Henry Adams, the famous American historian, who confessed that his historical neck was broken by the eruption of new, incomprehensible forces. Unable to choose between the Dynamo and the Virgin, he hoped to find comfort in the Dharma-Chakra. There were two ways out as he saw: admit that chaos is the law of the universe, and order the dream of man: or, eliminate the mirror of the self and thereof the refractive illusions of Samsara, of the world-process. Adams embodies these reflections

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in his poem entitled, *Buddha and Brahma,* which starts with Malunka's query to Milinda as to the meaning of Buddha's Padma Pani Mudra. The Vedantist Khatriya, while admiring the Sakya-Muni's way, still prefers the world of action, though it means strife. There is a fierce honesty in Adams' inference that the west, oriented to Kshatra-Dharma, cannot accept Nirvana as a way out of its Manichaean conflict.

T. S. Eliot's *Waste Land* contains many erudite allusions to Indian myth, religion and philosophy. Buddha's Fire Sermon and the Shanti-Vakya from the Brithadaranyaka Upanishad are the most important of these references. The benedictory formula: Da, Datta, Davadhvam, Damyata; Shantih-Shantih gives the Poem its shape and tone, and emphassizes the West's need for the East. Western Culture has led man to a spiritual waste land without any prospect of hope, fulfilment or salvation. Western society is a heap of broken images, corrosive memories and mithridated spirits. The twisted time-ridden individuals of ancient and modern cities of the west are contrasted with Dadhichi, Rishyasringa, Bhagiradha, Krishna and Buddha, who represent knowledge, fortitude, spiritual enterprise and redemptive action. Eliot has a high degree of sensitivity to Sanskrit usages, which he employs incrementally for purposes of irony and symbolic action. Take this passage, for instance:

"Ganga was sunken,
and the limp leaves
Waited for rain, while
the black clouds.
Gathered for distant,
over Himavant.
The Jungle crouched,
humped in silence.
Then spoke the thunder
DA!"

By using Ganga, not the distorted form, Ganges, Eliot captures the suggestive fulness of the root-meaning of the word, which is organic to his vision of a world in disintegration, overshadowed by a cosmic process that had lost its power of generic motion. Ganga sunken means the dried-up river as well as the potential flow —the antarvahini, the spiritual life that lies in earnest beneath the decaying surface affected by drought and dead men's bones. The jungle image is equally appropriate in a setting so profoundly resonant with Vedic litanies.

It acts out symbolically the wisdom of the Aranyakas and the primordial decrees of Nalmisha. This is flanked by the image as a crouching beast, which is the opposite of rita, and stands for the ecological erosion of the Western world. In the *Four Quarters*, Eliot incorporates Krishna's message of disinterested action into the Christian framework of the poem. In the *Cocktail Party,* he literally repeats Buddha's Dear Park Sermon when the psychiatrist asks the house-holder and the martyr each to work out their salvation diligently.

AJANTA FRESCOES

In conclusion, we may refer to Muriel Rukeyser's poem, *Ajanta.* The Ajanta frescoes symbolise a way of life and thought is disconcerting to the Western mind, for it trifles with time and space, revealing a thunder it never heard, a light it never saw. The poet, on looking at the paintings, finds herself entering the real world, not that of shadows, but of archestypal essences. She is full, and fulfilled.

"Came to Ajanta Cave,
the painted space of
the breast,
The real world where
everything is complete,
There are no shadows,
the forms of incompleteness
I stand and am complete."

Indian materials and themes are thus employed by the best American writers not derivatively, or doctrinally, but creatively. That is the best homage that genius may pay to genius. India has without question been one of the catalytic agents bringing American literature to dramatic self-reference. Yet, it would be a mistake to see in American literature an image of India either more or less than the look of a flower that is looked at.

—AIR Vijayawada

Indian Atomic Energy Programme

Past Achievements And Future Promises

By H. N. SETHNA, Chairman, Atomic Energy Commission

THE Indian Atomic Energy Programme is now nearly two decades old. It represents something of a unique experiment in fostering advanced technology on a large scale in an underdeveloped country.

The first problem was to convince the national planners that a nuclear energy programme was meaningful and relevant in the context of the development plans of the country. The meagre financial resources on the one hand and relative industrial backwardness on the other hand had to be considered. Thanks, however, to the dynamic efforts of the first Chairman of the Indian Atomic, Energy Commission, Dr. Homi Bhabha and the sympathetic understanding he received from the then Prime Minister, Jawaharlal Nehru, it soon became possible to convince the administrators and the politicians that nuclear energy was necessary, and indeed economic.

FIRM TECHNOLOGICAL BASE

One of the early tasks was to establish a firm technological base for the various activities involved in the development of atomic energy. A national research centre then called the Atomic Energy Establishment, Trombay and now renamed as Bhabha Atomic Research Centre (BARC) was created at Trombay near Bombay and a wide range of R&D activities was initiated, ranging from basic studies in nuclear and solid state physics to investigations in metallurgy, engineering, health physics and nuclear medicine.

Based on the experience gained at BARC, it has now become possible to start new production centres concentrating on specific aspects of nuclear technology. The Electronics Corporation of India Ltd., (ECIL) and the Nuclear Fuel Complex (NFC) represent two examples. Another notable spin-off will be Reactor Research Centre (RRC) located at Kalpakkam near Madras, where the development of fast reactor technology will be carried out.

Although India was not without a scientific base when the atomic energy programme was launched, organised science was something new to the country. Aside from the chain of National Laboratories set up by the Council of Scientific and Industrial Research in the first years after independence, the atomic energy programme was the only one to involve massive and organised scientific effort.

TRAINING PROGRAMME

As skilled manpower required for this was not readily available, a training programme was initiated at BARC for new university graduates so that they could be oriented to fit into the atomic energy programme.

This training programme has paid off exceedingly well, and the bulk of the scientists and engineers associated with the atomic energy programme, be it at BARC or at the Power Plants under construction in Rajasthan and Madras, are graduates of the BARC Training School.

As the research centre at Trombay began to grow, it became clear that one could look forward with confidence to the establishment of a base for nuclear technology, and to the availability of expertise and manpower to launch a largescale power programme. Accordingly in 1960 the Atomic Energy Commission submitted its first concrete proposals to the Planning Commission for the setting up of nuclear power stations in India. The basic premise was that nuclear power was essential even at that time for economically supplying energy in large parts of the country, and that it was the only major supply on which the country could fall back by the turn of the century.

In the first stage of the programme, natural uranium fuelled and heavy water moderated and cooled reactors of the CANDU-PHW type are being set up. At present 200 MWe side units are being installed, but as soon as manufacturing capability and electrical grid capacity as well as transport problems make it feasible, 500 to 600 MWe size units will be installed.

At the same time development work on the sodium cooled fast breeders has been initiated. A 40 MWt Fast Breeder Test Reactor is being set up at the Reactor Research Centre at Kalpakkam. Development work on advanced thermal reactors (which would be second generation heavy water reactors and which may have specific advantage over the CANDU-PHW design) is proposed.

Studies are being made at present to assess the potential of boiling light water as the coolant

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LIC Loans During February 1973

In keeping with its policy of giving priority to socially desirable investments, the Life Insurance Corporation of India advanced, during the month of February 1973, loans aggregating Rs. 11.95 crores to the State Electricity Boards of Haryana (Rs. 4 crores), Tamil Nadu (Rs. 3.75 crores), Andhra Pradesh (Rs. 2.50 crores) and Assam (Rs. 1.70 crores). During the month a sum of Rs. 20 lakhs has been invested in the debentures of Public Limted Companies in the Private Sector.

The Tamil Nadu Housing Board has been granted a loan of Rs. 1 crore. The Corporation has also advanced loans to the Co-operative Housing Finance Societies of Maharashtra (Rs. 90 lakhs), Tamil Nadu (Rs. 85 lakhs) Andhra Pradesh (Rs. 30 lakhs), Kerala (Rs. 10 lakhs), West Bengal (Rs. 10 lakhs)—an aggregate total of Rs. 2.25 crores.

A sum of Rs. 1.15 crore was also made available to aid Water Supply and Drainage Schemes of Maharashtra, Mysore and Uttar Pradesh.

Seventeen Zilla Parishads in Maharashtra also received a loan of about Rs. 3.17 crores.

New Branch Of Canara Bank Opened In City

A new branch of Canara Bank has been opened on Monday, March 12 at 3, Greams Road, near Thousand Lights, Madras. A large number of invitees attended the inauguration. Mr. N. R. Chidambaram, the Branch Manager, the staff, and Mr. C.R. Vaitheeswaran, Development & Public Relations Manager, Madras received the invitees.

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V.V.S. Aiyar

noted by him, including an interview with "Periyar" E. V. Ramaswami in the well-known Tamil weekly "Ananda Vikatan" some years back. "Periyar" (meaning "Venerable Elder") is 94 today, the doyen among social reformers in the South; his impact on the life of the Non-Brahmin communities and politicians is notable indeed. A close friend and contemporary of Rajaji another pioneer social reformer and nationalist he was in the Congress ranks in the 1922-25 period with which we are concerned.

Dr. P. Varadarajulu Naidu was a practitioner of indigenous medicine whose specific "Minsaara Rasam" was as famous as the "Amrit Dhara" of Lahore. He was an Editor of a weekly, "Tamil Nadu", which was published as a daily for some years, and a mass orator who was because of his oratorial powers called "the Tilak of Tamil Nadu". He was involved in a Sedition Case somewhere about 1919 and was ably defended by an up-coming lawyer from Salem C. Rajagopalachari (Rajaji) who had been dragged into politics by S. Kasturiranga Aiyangar, Editor of "The Hindu". Kasturiranga Aiyangar brought Rajagopalachariar to Madras, had him reside in one of his houses, and it was in that house in Cathedral Road, Madras (unfortunately now razed to the ground) that Gandhiji and Rajagopalachariar met for the first time and evolved the Non-Co-Operation Movement. This has been recorded by Gandhiji himself in his autobiography.

Among other participants in the controversy, K. S. Subramaniam, who was Joint Secretary with E. V. Ramaswami Naicker in the Tamil Nadu Congress is still actively alive, though out of politics.

When after the initial word-of-mouth propaganda reached some sizeable proportions and Dr. Naidu wrote in his "Tamil Nadu" weekly, in October 1924, Aiyar wrote a denial stating there was no discrimination in education and that only two boys had been granted exemption in the matter of inter-dining He also said that even as a young man in school he had written an article on the imperative need to reform society on the basis of bringing about a fusion between the new ideas of human dignity and age-old customs. Now, after his return to British India from Pondicherry, he had approached a venerable elder and savant, Kavyakanta Ganapati Sastrigal (Ganapati Muni) suggesting the calling of a conference to re-classify Tamil society according to the original conceptions of duties and birth, which would give most persons higher social status and classify most Brahmins into classes to which they should belong according to their work.

Unfortunately, Kavyakanta was away in distant Banares (Varanasi) and no reply had come.

Aiyar's clarification did not have its desired effect. On the other hand, it was dubbed as another retrograde move.

By the end of November 1924, Kavyakanta Ganapati Muni had returned South and at that time he was chosen Chairman of the Reception Committee of the annual general body meeting of the Tamil Nadu Congress Committee. E. V. Ramaswami Naicker presided over the Conference, which was held in Tiruvannamalai town in North Arcot District. Both the Kavyakanta and Ramaswami Naicker touched on the urgent need for reform in Tamilian society. The Kavyakanta went to the extent of saying that if the Vedas were the final authority for Hinduism, the Brahmins should set a high example, and if the Non-Brahmins denied the authority of the Vedas as they were prohibited from learning it, it would be quite understandable if they claimed to be Non-Hindus! As for inter caste dining, the Kavyakanta was all for it.

E. V. Ramaswami Naicker in his Presidential address said that the Brahmin-Non-Brahmin issue was an urgent one needing early solution. If only, he said, Mahatma Gandhi knew the full nuances of this vexed issue, who knows how long a fast he might undertake.

It must be pointed out here that both Kavyakanta Ganapati Sastrigal and E. V. Ramaswami Naicker were then active in Congress politics, and that the Kavyakanta was a Member of the Working Committee of the TNCC. The Working Committee at its meeting in Erode on January 17, 1925, appointed a three-man Committee consisting of the Kavyakanta, Thiagaraja Chettiar and K. M. Thangaperumal Pillai (Advocate and Editor of E. V. Ramaswami Naicker's weekly paper "Kudi Arasu"). Since the TNCC had promised a 10,000 rupee donation to Aiyar's Tamil Gurukulam, and had actually handed, Rs. 5,000, it was interested in the smooth functioning of the institution. The three-man Committee failed to solve the problem. Dr. Naidu and his supporters like E. V. Ramaswami Naicker then decided to block the coming in of further donations to the Gurukulam: some 20,000 had been promised or collected in Malaya, where Aiyar's first assistant ("Upa-Acharya," Vice-Principal) T. R. Mahadeva Aiyar had gone to collect donations. Also, they called a meeting of donors in the Presidency and passed resolution criticising Aiyar's stand and proposing a "satyagraha" to "capture" the Gurukulam.

In the meanwhile, word was received that Mahatma Gandhi, that year's President of the Congress, was coming down South to go to Vaikom in Kerala where a satyagraha was being conducted to gain for Harijans right of passage round a noted temple there. E. V. Ramaswami Naicker was one of those who participated in this ultimately successful satyagraha.

Dr. Naidu and Aiyar met the Mahatma in Vaikom and later in Madras. The Mahatma wrote some four lines and gave the original to Dr. Naidu and a copy to Aiyar. At Gandhiji's instance Aiyar agreed to give no more exceptions to anyone in the matter of inter-dining in the Gurukulam. As for what Gandhiji wrote in four lines, there was a minor controversy as to what he wrote. But Gandhiji's general policy statement on the question of inter-caste dining was made clear in a note by him in his weekly "Young India." Writing under the title "Inter-dining", Gandhiji said:

"A correspondent asks, 'Should children belonging to different castes and living in one boarding-house be made to dine together in a common dining room?' The question is not well put. But the answer to the question as it is put would be that children cannot be made to inter-dine. If, however, it be urged that no boarding house keepers can make rules requiring all who care to join it to inter-dine, it would be to compel children who are admitted without such stipulation as to inter-dining to dine in company with children belonging to other castes. In the absence of any rule to the contrary, I should imagine that the presumption would be that the usual rules for separate dining arrangements would apply. This question of inter-dining is a vexed one and in my opinion no hard and fast rules can be laid down. Personally, I am not sure that inter-dining is necessary reform. At the same time I recognise the tendency towards breaking down the restriction altogether. I can find reasons for and against the restriction. I would not force the pace. I do not regard it as a sin for a person not to dine with another nor do I regard it as sinful if one advocates and practises inter-dining I should, however, resist the attempt to break down the restriction in disregard to the feelings of others. On the contrary, I would respect their scruples."

The Mahatma had spoken, and its tenor was—as adumbrated in the last two sentences particularly—totally in favour of Aiyar's stand in the Gurukulam. But, his opponents would not accept Gandhiji's words as final, and they met together and decided to bring the matter before the Tamil Nadu Congress Committee, one of the donors, where they had a clear majority. After a heated debate, the TNCC appointed another Committee to smooth out matters. We shall see that in the next chapter, which also brings us the sad news of Aiyar's unexpected death.

(Next week: Raging Controversy)

"That woman must have been a telephone operator."

"Why?"

"Because she never answers you."

Israel Experts Turned Desert To Farmlands

SANTO DOMINGO: President Joaquin Balaguer of Dominican Republic, paid tribute here to Israeli technicians who, he said, helped turn a desert into one of the most highly productive farming areas in the Dominican Republic.

The President said, in an interview with United Press International, that Israeli engineers and agronomists had "done for an area of my country what they have been so successful in doing in their own—they brought water and farming techniques to a barren zone and made it blossom."

The Israelis made their contribution to the Dominican economy in the sisal area of Azua province, where the government is now countering a landing of guerrilles.

"Before the Israelis came to our aid," he said, "the sisal lands were a desert. Now we have banana plantations and highly successful vegetable farming. People who once had nothing, are prospering.

"Some of the peasants who lived in the area on a hand-to-mouth basis now have as much as $10,000 in the bank," Mr. Balaguer said. "And in very large degree their new prosperity is due to the selfless and hard work of the Israelis who came here to help them."

Mr. Balaguer, now in his second term of office, said his major effort at present was to repeat the sisal experience in many parts of the Dominican Republic.

He said he expected the country to have about one million new acres of farmland in production before the next elections, in 1974.

Already there had been appreciable increases in Dominican exports of sugar, coffee, cacao and tropical fruits, he said.

"For years we have had trade deficits. We have turned that corner, thanks to increased agriculture production and good prices for our exports. There is no way of telling how the prices will stand up, but our production will continue to increase," he said.

"The government has been giving vast quantities of land to peasants in sections large enough to provide for their own families and for cash crops. This together with large commercial plantations of cotton, sisal, coffee cacao, and diverse fruits has given great impulse to our economy," he said.

"The impulse was helped by the sisal experiment, and we hope to establish more and more such areas in the coming months," he said.

Mr. Balaguer said that his government was seeking help in the exploitation of vast mineral deposits of all kinds of the Dominican Republic.

Muscovite's Diary

Ivan Ivanov

INTERNATIONAL WOMEN'S DAY...

No other day in the year is filled with such a mixture of pleasures and problems for me as the 8th of March which is observed as the International Women's Day throughout the Soviet Union. It is indeed a pleasure to see all women, young and old, enjoying a complete holiday in a gay mood.

But at what cost? The entire burden of keeping the home falls on men. Those who have invented this International Women's Day should have been geniouses because, you can't make men realize the importance of women by any other "humanitarian" method! This one day's experiences are enough to reform the most indifferent of men during the rest of his life, but, perhaps, to be on the safe side, they have made it an annual features.

On the International Women's Day, men give their grandmothers, mothers, sisters and wives, some attractive presents and attend to all domestic work, relieving women of their heavy responsibilities.

The International Women's Day in the pre-revolutionary Russia was first observed in 1913 in Moscow, Kiev, Tbilisi and some other industrial centres. But the women's movement in Russia was older. Women workers were in the forefront in the revolutionary struggle even in 1905. In Russia, it developed as a part of the general movement for democracy and socialism.

An especially complicated task faced the movement in the Asian part of the tsarist empire, which after the revolution flowered into sovereign socialist republics bound up with voluntary fraternal ties within the USSR. These Asian socialist republics were at a more or less primitive stage of development.

All this backwardness has now gone and women are equal and proud partners with men in all walks of life in the entire length and breadth of the Soviet Union. From the factory bench to space travel, in every field of work and adventure women are competing with men. In many professions like teaching or medicine, women dominate, or virtually monopolise all important positions.

So, the Women's Day in the Soviet Union, is now celebrated more as a day of realisation and fulfilment, as a reminder of the rights the women enjoy together with men in a socialist society.

* * *

ASIA NEEDS DETENTE...

Whenever I hear disturbing news about the imperialist powers' disrupting activities in Asia, I used to wonder how the Asian nations are going to counter the menace. This naturally formed the subject of discussion when I met my friend Mr V. Yakovlov, who specialises in Asian affairs. "It is only by collective efforts that the Asian countries and peoples can ensure genuine peace" he said.

"Now that the war in Vietnam has ended", my friend went on, "Asian public become increasingly aware that ensuring security in the continent must become a common cause, a common concern of all Asian countries."

He pointed out that it was precisely from this proposition that the Soviet Union proceeded when it put forward, as early as 1969, the idea of creating a collective security system in Asia.

"Opponents of detente in Asia," he said, 'raise all sorts of obstacles in the way of development of peaceful co-existence and fruitful cooperation of Asian countries; in so doing they are guided by hegemonism and anti-Sovietism."

Mr. Yakovlav also exposed the hypocricy of imperialist circles which use Peking's theory of 'threat from the North" to China and pose themselves as defenders of the people's Republic of China from the supposed threat.

"But", he concluded, "whatever the interpretation of the Soviet proposal by interested parties, the fact remains that the Soviet Union is guided solely by humanitarian considerations and not by any selfish motive, since, it does not make any territorial claims in Asia and does not strive so receive military bridgehead there."

* * *

AN ORDINARY WORKER ON THE HIGHEST LEGISLATURE

Zoya Pukhova is a weaver. She has been at the Balashov mill for more than twenty years. Her job is to operate ten pneumatic looms, each turning out some 800 yards of fabric an hour.

But Zoya also has another job. She is a member of one of the highest bodies of the Soviet state—the presidium of the USSR Supreme Soviet.

This is the body which carries on the work of the Soviet parliament between sessions.

"I keep in constant touch with the Kremlin by telephone," she explains.

"They often ring me from Moscow to get preliminary agreement on some decision, if the question is one that can be easily cleared up on the telephone."

"Then the appropriate documents are simply sent to me for my signature.

"When you open your newspaper and read about some decree by the Presidium, this is the result of discussion in which all members of the presidium have taken part."

Zoya is naturally greatly respected at the factory by her fellow workers — but her parliamentary office doesn't bring her any special privileges on the factory floor.

"I'm just an ordinary member of the work team headed by assistant foreman Boris Burtsev," she says.

"We get on well with each other. Each of the seven weavers in our team has almost 20 years' experience behind her."

And she estimates that she and her workmates walk a good eight or nine miles a shift, round the machines.

When she is away from work on parliamentary business she gets her normal average pay made up. But most of the year she is there at her loom.

Soviet "politicians" would agree that you often learn more about the way to run a country at the workbench than almost anywhere else!

* * *

BISON AND THE BIKE...

There was an interesting item in the magazine "Chemistry and Life" which I would like to share with my readers!

Bison in the forests of Byelorussia are allergie to the noise of motor bikes—not all motor bikes—but just the models put out by the Kovrov plant near Moscow. They chase the bikes until they fall down exhausted.

The magazine explains that this odd phenomenon may be due to the engine's generating infra-sounds that infuriate the animals or it might be the product of fancy.

———

ALL THE DIFFERENCE

As Tommy was putting on a waistcoat which had been cut down from his father's overcoat, he began to grumble.

'What's the matter?" asked his father.

'Why," said Tommy, "this pocket's got no bottom to it."

"That's not a pocket," said his father; "that's a buttonhole."

* * *

CINEMATIC!

The cinema usherette was in the dentist's chair.

"Now, miss," asked the dentist, "which tooth is giving you all the trouble?"

"Second from the left in the balcony," she replied.

Valentina Nikolayeva-Tereshkova, the first woman-Cosmonaut and Chairman of the Soviet Women's Committee.

From page 3

Drift for ...

lity of the Government to contain its non-developmental revenue expenditure. Thus, the growth of investment through public sector could not realise its full potential even within the limits of the present level of draft made by the state on the social product.

A Budget which is prepared by adding up the expenditure claims staked by various departments and agencies and then pruning them according to overall resource availability, cannot give the growth orientation, rational socio-economic public choice and rigorous discipline required for the purposes of giving a big push to the economy in a planned way.

What we do in our country at the present moment is to make use of economic planning as just another instrument of economic policy like monetary, fiscal and direct control instruments of policy. Thus, planning does not emerge as an instrument which controls and regulates all the other instruments. Consequently, out of the total budgeted expenditure of Rs 7626 crores in 1973–74, Rs 4356 crores (over 57 per cent) is Plan outlay. while the rest is outside the Plan. It is important to realise the meaning and implications of this procedure and practice.

The limited role of the public sector and the large menu of the private sector go a long way in explaining the non-emergence of a planned economy in India. However, the fact that even 43 per cent of the Central Government's expenditure does not fall within the purview of overall public investment and planning outlays, heightens the unplanned character of the Indian economy. One reason for the failure to control the cancerous growth of what has come to be termed "non–development expenditure" from eating into fairly large expansion of public revenue is the inability of the Government to treat the whole of public expenditure as planned one, and apply the logic of planning to the entire range of public spending.

The point is that even in a mixed economy there is the need for planning all Government spending and treating it as a part of the planned sphere of activities under the public sector. Not only would this approach make for better physical and monetary balances in the economy but would change the criteria of decision-making from the present *ad hoc*, sectional pressure and manoeuvres on the part of each Ministry to an inter-related overall set of considerations in determining the magnitude and composition of public spending.

In this way, the ground would be created for relating each item of public expenditure to the overall growth strategy adopted for the economy. In so far as this procedure diminishes the area of bureaucratic discretion in the allotment of resources, it is likely to encounter stiff resistance from the bureaucracy and its allies.

Continued preponderance of Tax Revenue in the Total Revenue, specially vis a-vis Capital Receipts, is something that deserves attention; more so, because Tax Revenue is increasingly taking the form of revenue from indirect taxes. Now that the magnitude of investment in public sector enterprises is of the order of nearly Rs 5,000 crores, it must be expected to provide more funds for ploughing back. In this respect the role of pricing policy of public undertakings is not adequately realised.

In this connection it is important to bear in mind the relative role of pricing and tax policies. For example, in the 1973–74 Budget, the duty on tallow is increased. It is likely to marginally push up the cost of soaps. The import of this item is channelised through the State Trading Corporation. In order that the market prices of soaps do not go up, it was suggested by the Finance Secretary in the course of a press briefing that since the STC was making good profit on this item, it might be appropriate for the STC to absorb enhanced impost and thus leave the cost of soaps unaffected. That is to say, what is sought to be added to tax revenue is to be lost through a reduction in the profit of the STC.

The greater emphasis on indirect taxes is coupled with no increase in the basic rates of personal and corporate taxation. The ballyhoo about the steep and almost expropriatory rates of taxes on income, expenditure, property and capital transactions further supported by the Wanchoo Committee recommendations for reducing these rates owing to their counter revenue-productive nature has, it seems, succeeded in containing the Government from further increasing these rates. The investment strike of a sort which the capital market has been witnessing lately seems to have clinched the issue. Hence the search either for such commodities which may be taxed without affecting the working class cost of living index or for taxing intermediate and producer goods so that the price increase may not easily be attributed to tax efforts.

Whether such taxes can contain inflationary pressures, redistribute incomes and encourage savings is doubtful because of the vast sums of black money in the hands of the well-to-do. An analysis and study of the consumption pattern of the top 20 per cent income recipients, and a look at the pattern of industrial production, can easily provide a list of commodities where substantial tax burdens could be imposed. To the extent such levies turn out to be prohibitive, efforts would have to be made to secure foreign markets for these products. The 1973–74 Budget levies on air-conditions, refrigerators, decorative plywoods and shaving creams etc hardly serve the ends mentioned above.

The *Economic Survey, 1972–73* while discussing major fiscal issues, has this thesis to propound: "A strategy for non-inflationary financing of public sector investment involves a judicious combination of the following three elements: restraint on the growth of expenditure on public consumption, mobilisation of additional resources by way of taxation and accumulation of profits by public undertakings, and diversion to the public sector of private savings in excess of the requirements of socially productive investment in the private sector.

If along with the abjective of "non-inflationary" financing, one were also to add the objective of devising fiscal policies capable of fostering growth with social justice, at least two considerations would suggest themselves: one, curtailing that part of public consumption which does not benefit the vulnerable sections of the population (the lowest 30 per cent in term of private consumption, for instance), and the other, having such a mix of income-wealth taxation and taxation on those goods of elite consumption which can find a market abroad and force savings.

Such a tax effort is nowhere visible in the 1973–74 Budget. What one finds here is a clever pick and choose policy in designing tax proposals so that the vocal urban and middle classes are left bewildered, the masses unaffected, and the monopolies, trade and industry and the powerful satisfied that it could (and perhaps should) have been worse.

Neither would the deficit be as small as it is made out in the Budget, nor even smaller than the 1972–73 level, nor price rise reasonably low. Nothing better than the last year's poor performance is visualised on the front of savings, investment and growth rate. The higher Plan outlay is unreal because, after allowing for the actual and impendent price rise, we would hardly be able to match the last year's level.

The 100 crore rupees provision for jobs for the educated, apart from being based more on the political weight of this section than on anything else, is indicative of the incorrect understanding of the employment problem as one of providing wage-employment outside agriculture, industry and infra-structure like transport, power and communications. Small commodity production and self-employment, and rapid industrialisation based on labour intensive techniques have to be mainly relied upon for eradicating lack of work opportunities.

In sum, it is a Budget of drift —drift for want of direction arising from a stalemate in social relations. So long as those with the maximum stake in our development cannot exercise decisive control, but hold a potential threat, such annual exercises at moving in several directions simultaneously would continue.

—*Mainstream*

CIA Overdoes It

U.S. Congressman Edward Koch has charged the Central intelligence Agency with interfering in U.S: internal affairs, following press reports that CIA agents are instructing the police in political espionage methods.

Under the National Security Act of 1947 the CIA is empowered to engage in intelligence and other subversive activities outside the bounds of the United States, but it is prohibited from going in for sleuthing and political espionage in the country. The heads of the CIA, however, taking advantage of the special place they occupy in the Administration, have long ignored the law. According to the U.S. press, it has agencies under various labels in twenty U.S. cities, including New York, Chicago, Los Angeles, Boston, Detroit, Philadelphia, San Francisco, New Orleans and Seattle.

Unemployment Is Ruled Out

MOSCOW: According to statistical data the number of workers and employees in the USSR increased last year by 2. 5 million and topped 95 million.

The ever-growing demand for manpower is necessitated by the high rates of economic development in the country. Industrial and housing construction is under way practically in all the districts, especially in the East. Some 400 major enterprises went into operation last year and 11 million people moved to new flats. In conditions of planned socialist economy, modernisation and automation of production do not lead to unemployment. The ramified network of free courses enables each worker when necessary to raise his professional skill or master a new trade. Last year 20 million people completed such courses.

SECOND THOUGHTS

A beggar knocked unwittingly at the door of the village policeman. The door opened, and, with head bent, the beggar started telling the tale.

"I didn't eat yesterday," he whined, "and I didn't eat today." He raised his eyes, and noticed blue uniformed legs. "And lumme," he ended, "I don't care a hang if I don't eat to-morrow either!"

From page 7

Indian Atomic...

in a heavy water moderated reactor.

SECOND STAGE

In the second stage of the programme, it is proposed to build fast breeder reactors using plutonium as the fuel, which would have been generated in the heavy water reactors. However, since the doubling time for installing nuclear power will be shorter than the doubling time for the most optimistic type of fast breeder, it would be necessary to continue construction of heavy water reactors even after the fast breeders have been commercially accepted as economic power reactors.

Two types of fast breeders have been considered for this presentation—one with a specific fissile inventory of 2.5 kilograms per MWe and a doubling time of 7 years, and the other with a specific fissile inventory of 3.0 kilograms per MWe and a doubling time of 13 years—the rate of introduction of fast breeders being controlled by the availability of plutonium from the heavy water reactors, and the plutonium generated by the fast reactors themselves.

It may be noted that out of the total nuclear installed capacity of 43 million kilowatts by the end of this century, about 50 to 75 per cent may be from fast breeder reactors and the rest from heavy water reactors.

MAJOR EFFORT

As the natural uranium resources in India are limited, it would be necessary to minimise the total quantum of power generated by heavy water reactors and maxi mise the contribution of the fast breeders. Hence, during the following two decades a major effort will be made to develop efficient and econmic fast breeders.

Because of the limited resources of natural uranium, studies are being carried out on the use of thorium in fast as well as in thermal breeder reactors. It is proposed to initiate development effort on the thorium breeder reactors during the second stage of the programme, so that thorium breeders would be available in the third stage.

THIRD STAGE

Hence, in the third stage it is quite possible that there would be four types of reactors simultaneously in operation, viz. natural uranium fuelled heavy water reactors, advanced thermal reactors, plutonium fuelled fast breeders, and breeders using the thorium cycle.

The role that nuclear power could play in the future in starting agro-industrial complexes in the different regions of the country has been well brought out in the recent studies carried out with respect to Western Uttar Pradesh and Saurashtra regions in India. The impact that the supply of cheap energy and water could make on the countryside is so striking that it would be rewarding to initiate the necessary development programme towards the establishment of such agro-industrial complexes.

Apart from power production, the multifarious applications of radioactive isotopes and radiation constitute the most important use of atomic energy, and will play a significaat role in the future. Radioisotopes have been widely introduced in India to serve industry, agriculture and medicine, and their role in these areas is expected to increase vastly both in quantitative and qualitative terms.

RADIATION MEDICINE CENTRES

The current level of diagnosis using radionuclides in India is only 0.05 per thousand population per year. Our plans envisage a twenty-fold increase within this decade. This ambitious programme would require the setting up of zonal radiation medicine centres and sm ller radio-isotopic laboratories in over a 100 medical college hospitals throughout the country.

To sustain the vastly increased variety and quantity of radiopharmaceuticals that this programme would require, various specific steps are being taken. These include the construction of a new high flux reactor with substantial irradiation volume and a variable energy cyclotron of 60 MeV. Production facilities for manufacture of 'end–products' will also be enlarged.

High specific activity Co-60 will be available in substantial quantities from our new power reactors. This will enable us to widen the coverage of teletherapy in the country. As a major break-up, a manufacturing programme for indigenous teletherapy units is being implemented by private industry with the assistance of BARC.

The well known industrial applications, such as nuclenic gauging, industrial isotope radiography and radioactive tracer studies are fast becoming commonplace.

In the future, however, isotopic power sources with their potential applications in remote and inaccessible areas, as satellite power sources and for use in cardiac pacemakers, will receive greater attention. The development of suitable radio–active sources and of conversion systems for these devices will be taken up shortly.

INDIGENOUS Co–60

Co–60, in view of its versatility, ease of production, long half-life and low cost, occupies pride of place as the most important radiation source. With the commissioning of the new power reactors, up to 3 MCi per year of Co–60 will be progressively available within the next 5 years. The infrastructure for handling and processing such large quantities and for fabricating sources, is nearing completion. The indigenous availability of Co-60 will give a boost to our programme for setting up large irradiators for sterilization of medical supplies, food preservation, wood-plastic composites manufacture, chemical synthesis and plastics modification processes, within the decade. Large scale sewage treatment and manufacture of concrete polymer composites, are some of the other promising possibillties using Co-60 in the not-too distant future.

The first plant in this series for sterilization of medical supplies will be completed by the end of 1973. Apart from fulfilling a long-felt need for ensuring sterility in medical products, it will give an impetus to the development of the single-use medical products industry and other ancillary industries in the country. Within the next 20 years, it is expected that there will be similar plants in each of the major regions of the country to satisfy the domestic demand.

Food preservation by irradiation should gain wide acceptance in the near future in view of its distinct benefits. The Indian programme envisages large demonstration plants within this decade for preserving commodities such as onions, potatoes, grains, fruits, and sea-foods. The demonstration plants are expected to be followed by commercial food irraditors.

Applications of radioactive isotopes are of great importance to developing countries whose economies are based primarily on agriculture. The estimation, using irrigated water, of underground water resources and the rate of their replenishment in areas such as the Gangetic Plain, where extensive lift irrigation is proposed, is of great practical importance. India has recently witnessed the dramatic economic impact of new strains of seeds. Use of irradiatien for enhancing the capability of the plant breeder is of major significance. Similarly, a study of the intake of fertilizers and of water by plants using labelled chemicals can lead to adoption of procedures for the efficient utilisation of both.

Considering the importance of the nuclear programme to India, the pace of research and development in nuclear technology is being stepped up. The construction of a 100 MW research reactor at Trombay and the rapid expansion of the programme of the RRC bear testimony to this.

In the words of the Prime Minister, Shrimati Indira Gandhi "to those who made remarks about a cow-dung economy wishing to go in for nuclear energy, Dr. Bhabha convincingly explained the technological fall-out which results from atomic energy and the impact it has on other fields of economic and scientific activity. In the last 20 years we have been engaged in building our infrastructure...If the building of the infrastructure itself incorporates higher technology, future progress will be accelerated. It is this point of view which gives significance to the work of the Atomic Energy Department."

The Federal Bank

Branch in City

The 100th Branch of the Federal Bank Ltd, Alwaye (a Scheduled Bank) was declared open by His Excellency Mr. K. K. Shah, Governor of Tamil Nadu on Friday March 16, at 14, Mount Road (near Plaza Theatre). Mr. P.U. Shanmugam, Minister for Revenue, presided over the function.

Mr. K P. Hormis, Chairman and Mr. N. P. Mathai, the Manager of the Bank welcomed the distinguished invitees who came in large numbers for the inauguration.

"Hifazat"

Balakrishna Movies' latest Hindi film 'Hifazat' (Eastman color) featuring Vinod Mehra, Asha Sachdev, Kanhaiyalal, Kumud Chuggani, Cocacola, Narendranath and Jyothilakshmi is to be released shortly.

Ashok Kumar, Iftekar, Ranjit, Madan Puri and Lalitha Pawar are the guest artistes.

The dialogue is by Prem Kapur, Lyrics by Majrooh and music R. D. Burman. Playback is by Kishore Kumar and Asha Bhonsle, art by B. Nagarajan and editing by B. Kandasami. Hi alal, Chinni-Sampath and Krishnakumar a e in charge of dance direction. V. S. R. Swamy handles the camera. Direction is by K.S.R. Das and the film is produced by R V. Venkateswarulu and B Sushila Devi at Vauhini, Sarada, Golden and Bharani studios.

M/s. Balakrishna Movies held a 'get together' party at their office at Bazlulla Road, T'Nagar, on March 14. The leading artistes and technicians of the picture were introduced to the press.

Discount For Non-Smokers

Besides being more prone to heart attacks, canc r and other ailments than non-smokers, smokers are twice as likely to smash up their cars. "The act of smoking must cause some distractions—smoke in the eyes, flicking ashes off one's clothes," says the Vice President of an insurance company in Los Angeles (U.S.A.) Smokers are genera ly apt to be more reckless, he affirms. The company hopes to reduce the number of smoking drivers by offering a 22 per cent discount on premiums to all who quit smoking.

After Six Visits And Three Books India Still Fascinates American Author

IT began as a dream, soon became an obsession. And an obsession it remained for 13 long years...and then reality in hard cover.

That is the story of a remarkable book, "India: A World in Transition" as narrated by its American author Beatrice Pitney Lamb.

Mrs. Lamb was first inspired to write this book in 1949 when she came to New Delhi to participate in a conference on Indo-U.S. relations.

"On coming here," she said: "I felt that the friendliness of the people, of which I had known very little previously, was beginning to have tremendous impact on me."

"I also realised that India had a vast gamut of information to offer to the world and it required a suitable medium to convey and share this knowledge with the people outside the country, particularly those in the U.S."

Mrs. Lamb felt that writing a book on the different facets of Indian life would benefit tourists visiting the country for the first time.

With this in mind, the American writer took up advanced courses of study in Indian history, culture, religion, philosophy and politics. "It was like a hobby for me to study all these subjects," she said.

She also wanted to live in India for some time and conduct field research for her book. This resulted in her second trip to the country in 1956 during which she travelled extensively and interviewed Indian people. She came back in 1958 and 1960.

The information she had gathered went into a pamphlet titled: "An Introduction to India" Later, this piece served as a preface to her book. "India: A world in Transition," which was published in 1962 by Frederick Prager. Orient Longmans brought out an Indian version and translations in Hindi and French.

This 500-page book covers topics concerning Indian history, religion, politics and philosophy, and as Mrs. Lamb herself puts it, is designed to serve as a sort of introduction to tourists visiting India. She recalled, "It took six years to complete it and involved hard labour, but it paid off." Over 100,000 copies of the first edition were sold and this was followed by two more editions in 1965 and 1968.

The book received very favourable reviews in the U.S. and India. Writing in the *Joural of Asian Studies*, Richard L. Park of the University of Michigan said: "The author is a master at synthesizing authentic research findings and in placing the parts in a framework of interpretation that is sound and unpretentious. I know of no other introduction to India that is so balanced in coverage, accurate in detail and insightful in interpretation."

The Hindu said: "It is a book for everyone to read and own."

American educators have widely acclaimed the book and its use today in more than 200 colleges in the U.S. testifies to its popularity.

She followed up her first book on India with two more—"India" and "Nehrus of India: Three Generations of Leadership." The former is meant mainly for school children and is heavily illustrated. She made two more visits to this country gathering more material for these books.

Recently she was here on her seventh trip, which she says was the longest lasting. about three months, and meant for "relaxation and possibly another book,"

During this visit, she pointed out, she was able to talk to more women—an opportunity she missed during her earlier visits. "While conversing with them, I was able to see a different India and the information they have given me may well help me to write another book on this country, perhaps with a new slant."

In her previous visits, Mrs. Lamb relied mainly on the views of men for gathering information required for her book. "The views of women on the country's problems are markedly different and some of them very interesting too," she added.

The books on India are not Mrs. Lamb's only literary achievements. She is the co-author of the book: "United Nations" with Allan W. Dulles and the compiler of the vo'ume: "Trade and Aid." She has also written scores of pamphlets and articles on a variety subjects.

Wife of a New York corporation lawyer, Mrs. Lamb holds a Master's degree in political science from the Columbia University. Her main field of interest lies International relations and she taught this subject at New York University from 1953 to 1965.

As a teacher and writer, Mrs. Lamb has travelled widely throughout the world. Though almost all her visits to India were in connection with her books, she says that after each visit she feels an urge to come back here again and again "to enjoy the excellent winter climate and the warm friendship of the people."

New Rubber From Old

By K. P. KRISHNA PILLAI

"DON'T throw away scrap rubber tyres, tubes and other miscellaneous rubber articles. We can make fine grade rubber from them. This was what an enterprising young business executive told me the other day in Cochin.

He is Mr. Lala Mathai, Works Engineer and Chief Producrion Executive of the Kerala Rubber and Reclaims Limited. To prove this claim Mr. Mathai pointed out to me bales of rubber and said: "This is the highest grade reclaimed rubber in the world. It is produced from waste rubber products.

Kerala Rubber and Reclaims (K.R.R.) is yet another factory that has come up with American collaboration in the Cochin industrial belt and is contributing to the economic development of the state.

The U.S. Rubber Reclaiming Company, the world's pioneer in the development of reclaimed rubber—a unique and continuous method of reclaiming rubber —is the American collaborator with the Kerala Rubber and Reclaims. The American firm which has plants at Buffalo, New York and Vicksburg, Mississippi, has given the Kerala Rubber and Reclaims the know-how and the licence to produce Reclaimator Rubber with the same trade mark. The designs of their exclusive machines were also given to this Kerala film. The machines were manufactured by Pomini-Farrel, the Italian subsidiary of the U.S. Machinery Co., which is a division of the Farrel-Birmingham Machinery Corporation, Arizona.

India is one of 9 countries including the U.S.S.R. which have been licenced by the U. S. Rubber Reclaiming Company to use the Reclaimater Process for extracting rubber from worn out rubber products.

"The reclaimed rubber," Mathai says, "has some advantages over natural rubber and synthetic rubber such as faster mixing, faster and smoother extrusion, better dispersion, faster curing and improved abrasion resistence." It is also more uniform and homogeneous.

Its major disadvantage is its lower tensile strength.

However, most of its applications do not need high physical strength properties. For products like cycle tyres, battery cases and other moulded goods, the Reclaimator Rubber is very useful and cheaper.

Prominent rubber tyre manufacturers like Dunlop, Good Year. Madras Rubber Factory, Premier Tyres, and manufacturers of batteries like Exide and Standard, are regular purchasers of K.R.R Reclaimator Rubber. Regular production was started in September, 1972. The present level of production is only one-third of its installed capacity of 72,000 tons per year.

The U.S. collaborators have no financial participation in this Kerala firm. The Industrial Credit and Investment Corporation of India, the Industrial Finance Corporation of India, the Life Insurance Corporation of India, the Kerala State Industrial Development Corporation and the Kerala State Financial Corporation are participants in this unique public limited concern with a capital outlay of Rs. 47.25 lakhs.

A graduate in chemical engineering from I.I.T., Madras, Works Engineer Lala Mathai, had his training in rubber reclaiming processes at the Vicksburg, Mississippi plant of the U S. collaborators. He also visited several other factories in the United States as well as in Europe and Japan, to acquaint himself with the process of manufacturing rubber tyres and tubes and the machines that make these products.

Reflecting on his study trip in the United States, Mr. Lala Mathai said that he did not personally come across any racial problems in Mississipi. He said: "There are several coloured people working in the Vicksburg plant and I found them getting on very well with the white men.

Mr. Mathai also stopped over a few days at some southern farms and cotton plantation. "Agriculture in America is completely mechanised," he said, "the cootton estates extend over thousands of acres and use huge cotton harvestors They are very impressive machines."

The importance of the company's collaboration with the American firm was stressed by Managing Director P. J. Mathai. He said, "India needs to make a leap to keep up with the technological progress achieved by the western countries in a decade or two. This is possible only through collaboration with firms like the U.S. Rubber Reclaiming Company, whereby we can easily get the accumulated know-how of the industrial nations."

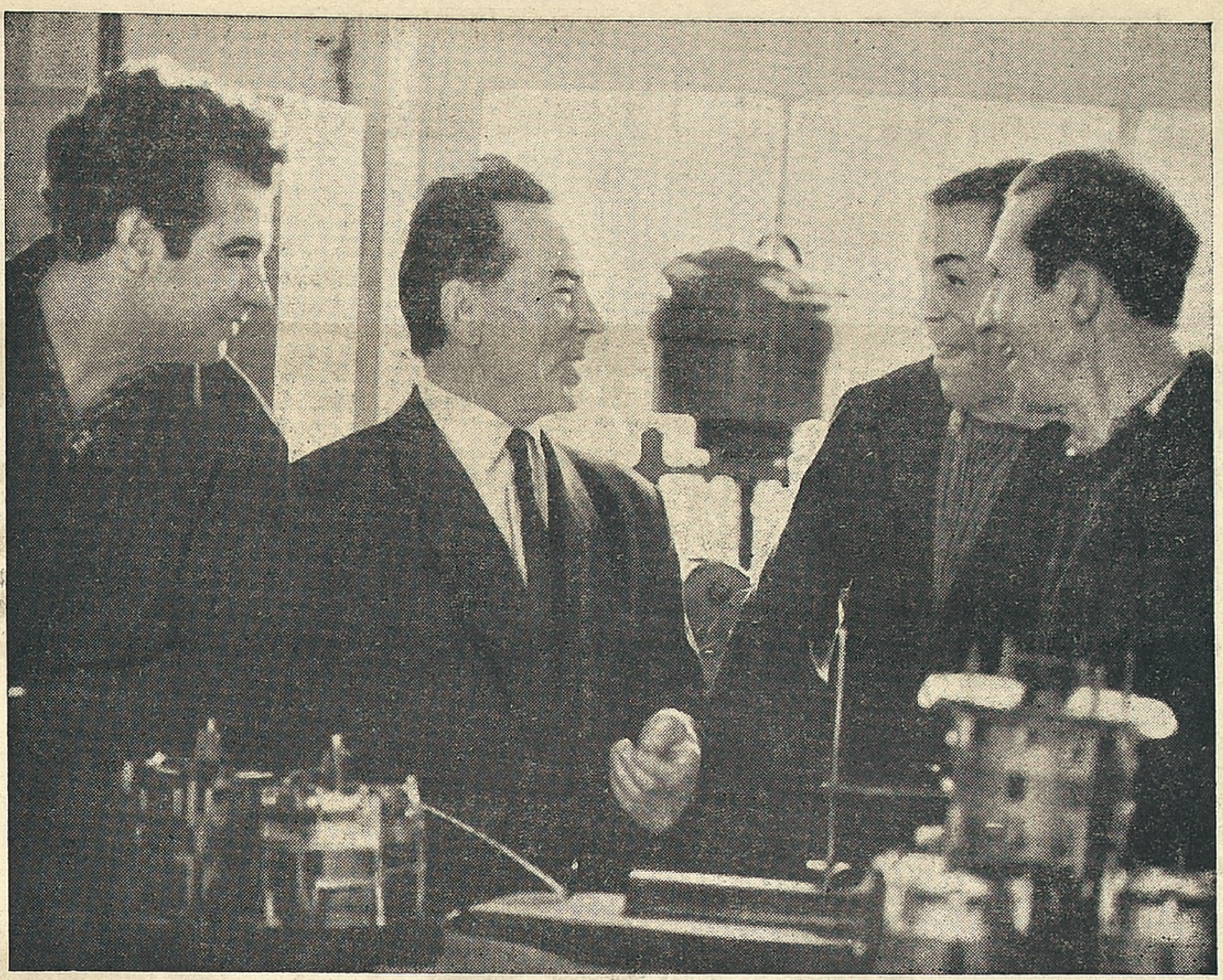
MORE TROUBLE

The landlord called at a house in which, after some undesirable occupants, new tenants had been installed. The wife, not knowing him, asked what he wanted.

"I'm the landlord," he said. "I want your rent."

"Well, I'm bothered!" exclaimed the woman. "That's just why we left the other house!"

Even at home, Sergei Nevstruyev does not remain aloof from the affairs of his plant.



Sergei Nevstruyev among young workers.

Alexei Semenov had been working in a plant for almost 45 years.

From Second Cover

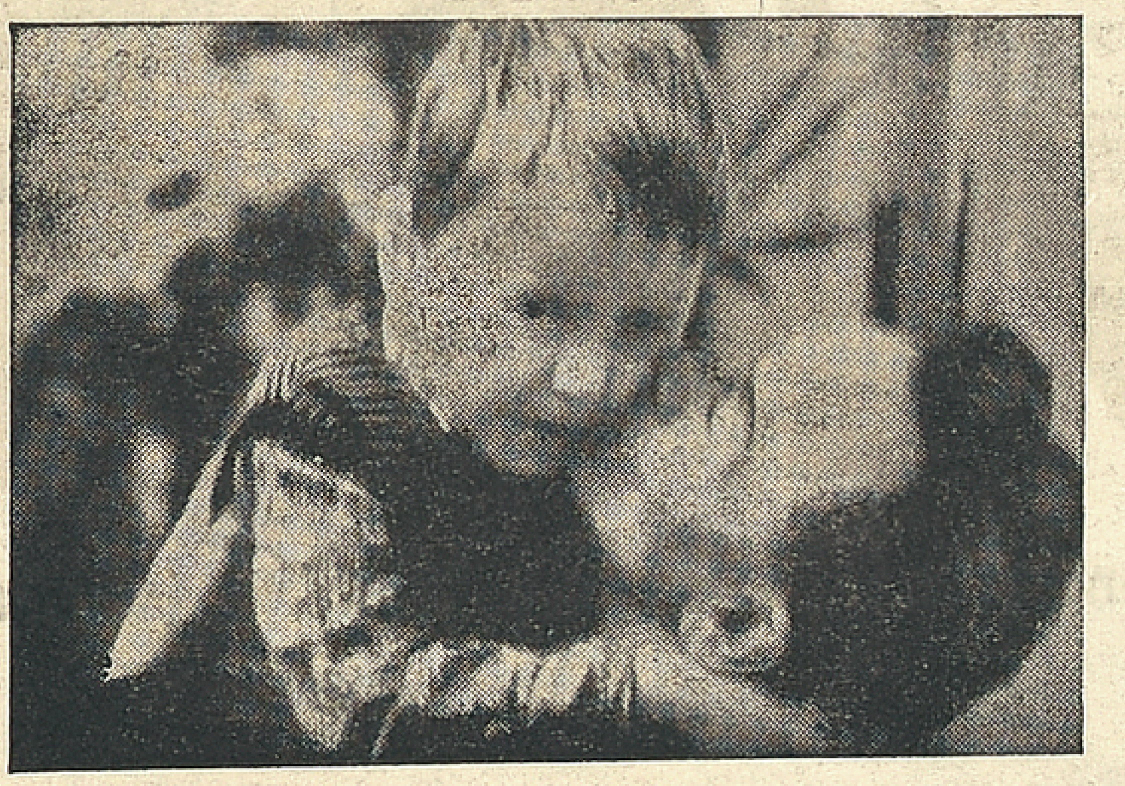
department and undergo medical examination.

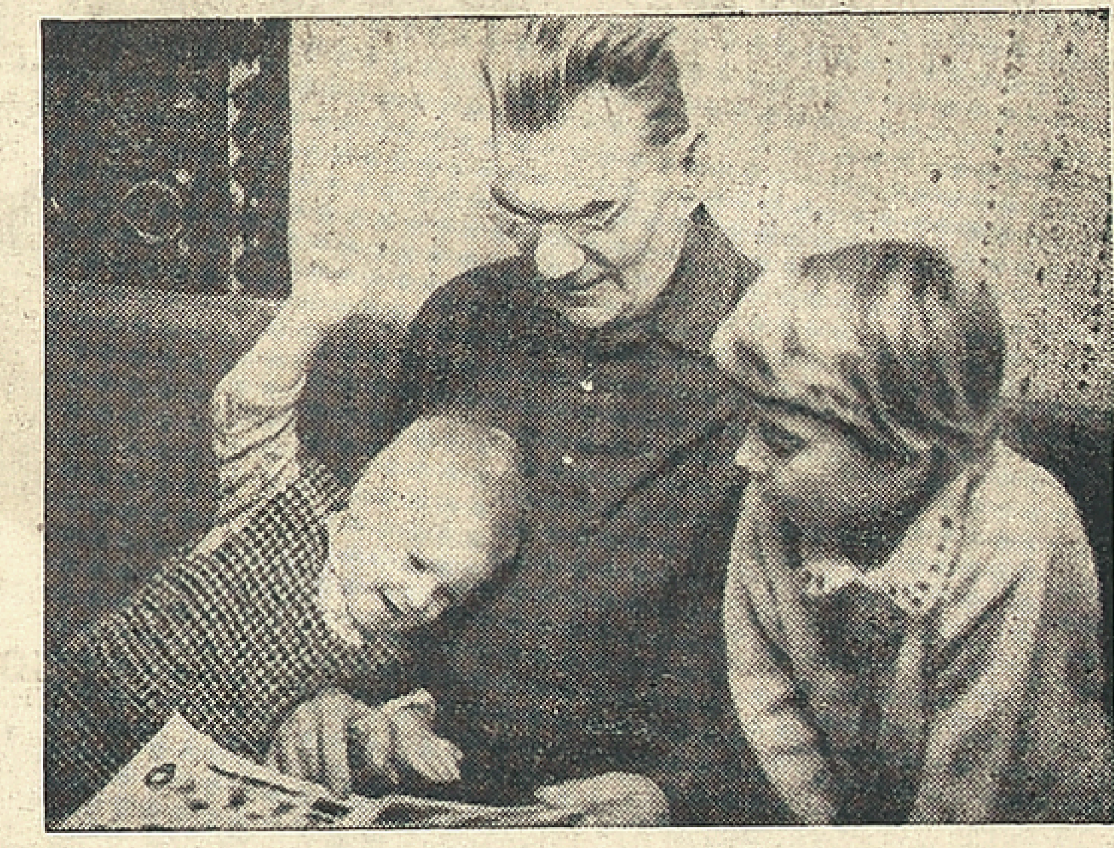
The new arrivals are provided with everything, from handkerchief to winter coats. But, of course, they may bring whatever things they want with them.

The inmates are provided with cultural services also. Each morning the attendants take newspapers and magazines to all the rooms.

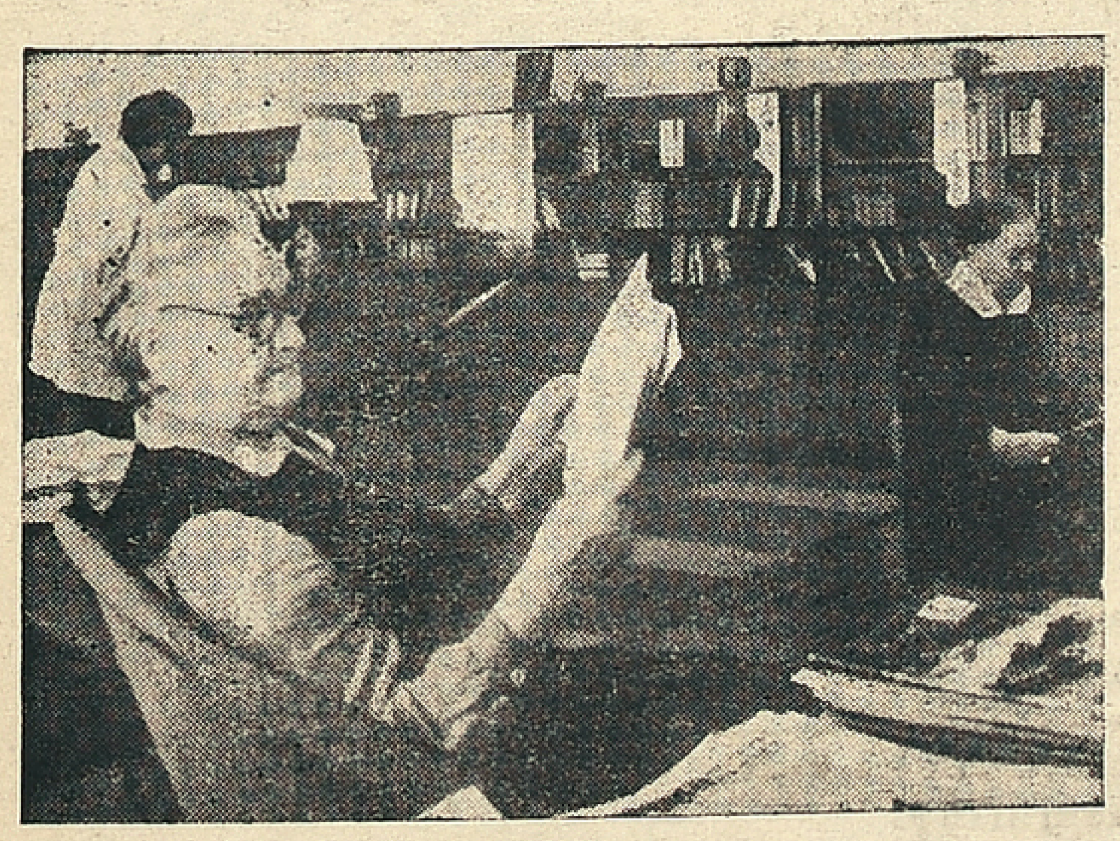
Nurses read newspaper. for those who cannot see well. The homes have libraries and TV sets.

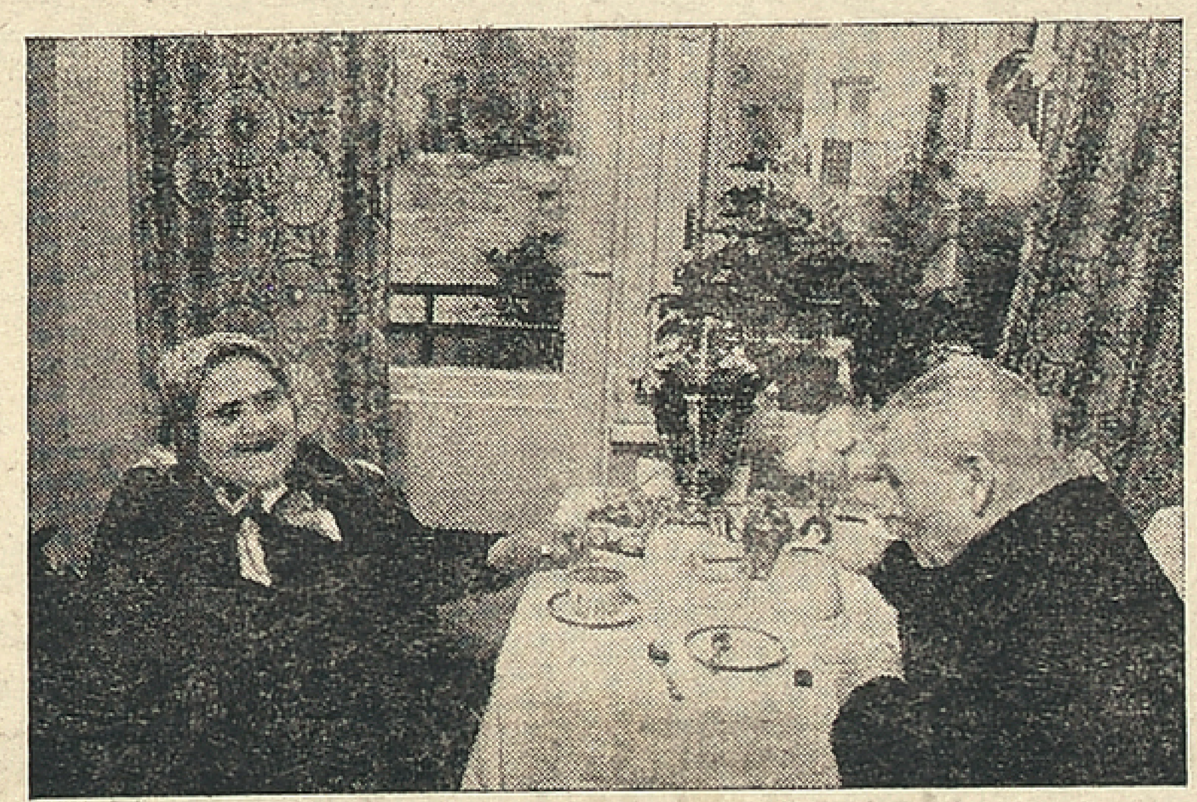
The inmates can meet their friends and relatives at any time. Sometimes they go visiting for quite a long time and then come back to the home.

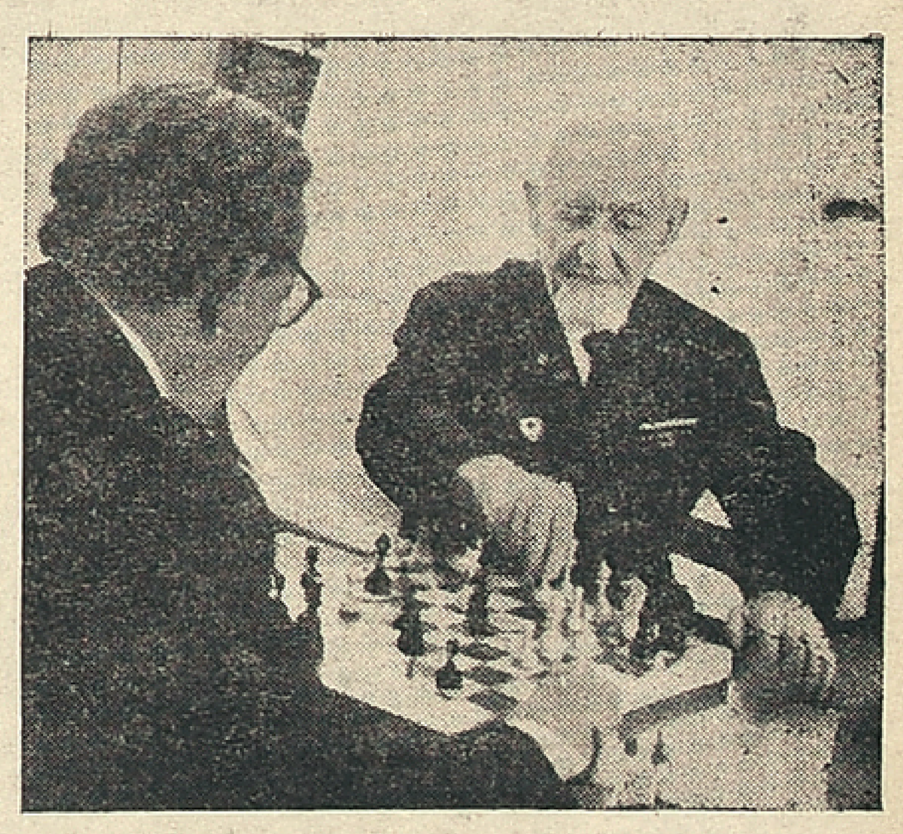




Grandfathers and Grandchildren







Left : There are thousands of volumes of Diverse Literature at the homes for the old. Centre : Maria and Nikolai Prilpsky (84) celebrated their Golden Wedding two years ago. Right : The hobby of Alexander Gushchin (90) is chess.

An artist's impression of some of the old people in U.S.S.R. (see feature on inside cover pages)

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